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DEVELOPMENT DIGEST

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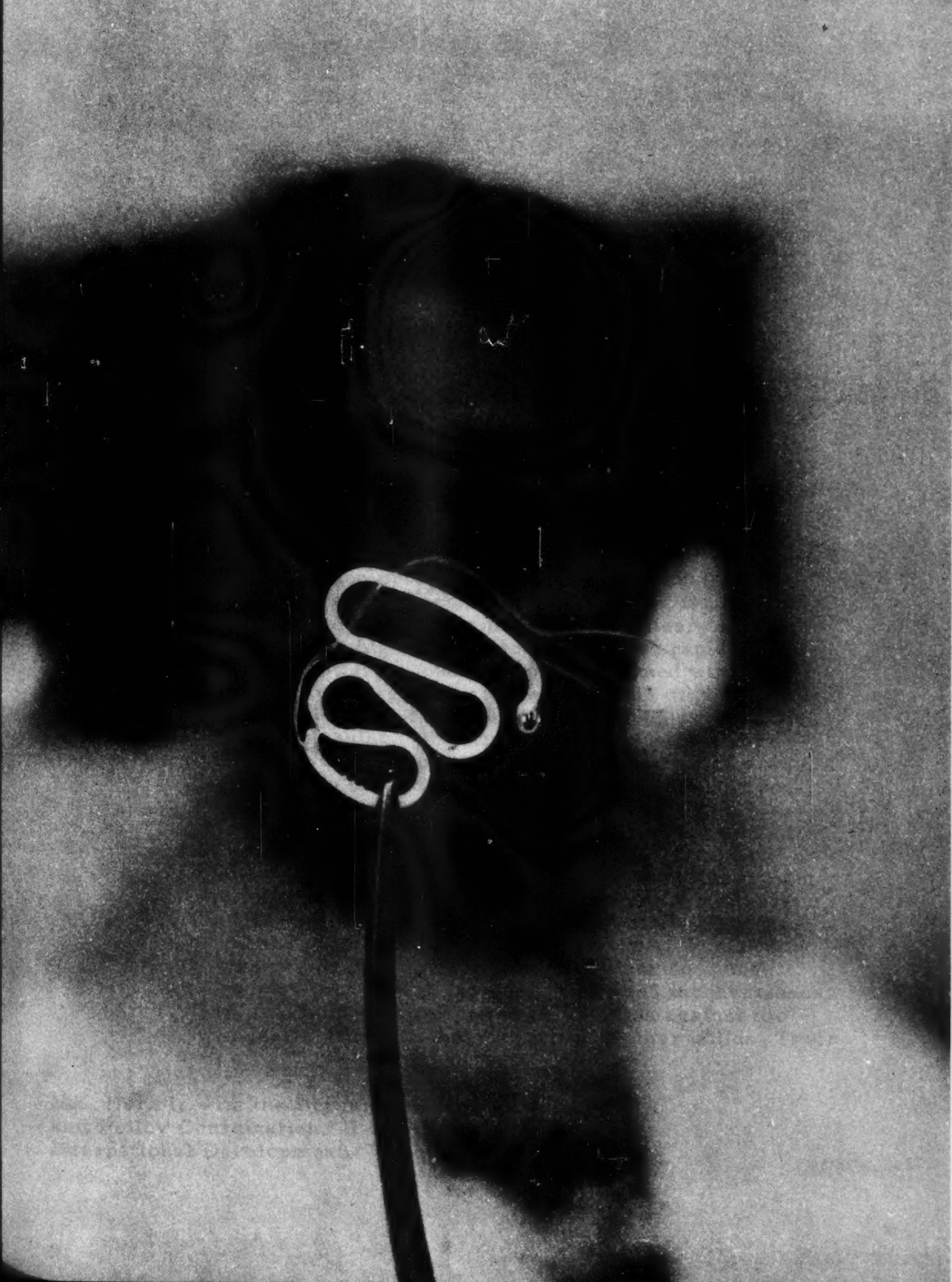
BEYOND FAMILY PLANNING



DISTRIBUTION OF IUDS,
SUCH AS THE ONE SHOWN HERE, IS ONLY
ONE APPROACH TO POPULATION CONTROL.
[PHOTO: AGENCY FOR
INTERNATIONAL DEVELOPMENT]

Thoughts on Supply and Demand in Family Planning

Barbara Herz

[Population programs stressing the provision of contraceptives and of relevant information assume a desire for family planning, but recent developments suggest that this demand may be much weaker than has been thought. More research on fertility determinants is badly needed, as are pilot programs on means of increasing the demand for family planning—particularly in experiments with financial incentives.]

Population programs and population assistance have typically concentrated on supplying family planning services and information on the theory that this would bring high birth rates down most rapidly. Recently, however, many people concerned with population have suggested greater attention might usefully go to problems of motivating more people to practice family planning. If couples are absolutely determined to avoid pregnancy, they will often find a way, even in the face of severe shortages of modern contraceptives or prohibitions on abortion. If couples positively want another child, the strongest pleas for family planning will fall on deaf ears. But most couples may fall between the extremes -- they might be lukewarm at best about the prospect of another child, but the available methods of family planning seem costly, risky, or just a nuisance. In choosing whether or not to practice family planning, those couples must weigh the cost, risk, and inconvenience of available contraceptives or abortion against the undesirability, as they see it, of another child. Their

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decisions -- however made -- may well determine how fast and how far birth rates fall.

In some cases the provision of more attractive, safe, and effectively family planning services might be enough to tip the balance in favor of contraception. Supplying better services is critical, especially for poor people who have never had access to such services. But it is also important to look further at what makes prospective parents want or not want another child. Better understanding of parents' views will enable family planners to improve the appeal of family planning service programs (through better program design, counseling, and so on). It will also enable policy makers to work out complementary programs and policies that will enhance the attractiveness to parents of smaller families, and so strengthen the "demand" for family planning services. If parents go from being lukewarm about another child to being positively cool to the idea, the available means of family planning won't look as bad.

Many in the family planning movement have held that the primary remedy for "too rapid" population growth is better family planning services. They believe many or most couples in fact would prefer much smaller families than they are having, so that supplying attractive family planning services -- including vigorous information, education, and communication components -- should suffice to reduce birth rates sharply and quickly. So we must ask: have family planning service programs been a success so far? Unfortunately, it is extremely difficult to say. This is partly because data available on these programs are often incomplete or of poor quality. But there is also considerable disagreement over what "success" does or should mean. Usually it is defined in terms of specified birth-rate or fertility reductions that the programs are expected to bring about. But the attainment or non-attainment of such projected targets may be a poor measure of success, because these birth-rate targets sometimes have been ambitious to the point of unreality. Further complications arise because other forces of change also affect birth rates.

Several European countries, of course, reached virtually stable birth-rate levels long before modern contraceptives became available, suggesting that when there's a will, the way isn't always that big a problem. That basic piece of history indicates that family planning technology may not be the whole answer.

In some countries with modern family planning service programs, encouraging though modest decreases in birth rates and fertility have occurred. In such instances observers often conclude that family planning service programs are principally responsible. But in many of these countries, birth rates seem to have started down as the nations modernized <u>before</u> family planning service programs were

operating on a significant scale. And where birth-rate declines do postdate the introduction of family planning service programs, careful study of available statistics appears to indicate that -- apart from an initial use surge attributable to new contraceptive methods -- women's education, lower child mortality, economic improvement, and so on account for a significant portion of further birth-rate declines, by encouraging parents in one way or another to prefer smaller families.

In other countries with fairly extensive family planning service programs, birth rates have failed to fall as fast as planners had hoped or as official plans projected. Possible explanations are that too few contraceptive services were provided or pills handed out, and perhaps that officially sanctioned abortion was unavailable; or too few trained personnel were put to work on the problem, or the bureaucracy moved too slowly, or publicity was scanted -- in short, that the supply of family planning services was still inadequate. Undoubtedly that is so in many cases, but it may not be the whole story. Deficiencies in the supply of services do not rule out deficiencies in demand for those services.

In countries where birth rates are falling only slowly despite reasonably well-utilized modern family planning service programs, the slow decline may be partly because of the so-called "substitution effect" -- that is, many acceptors of the new services may have already been using some other method of birth control, whether coitus interruptus, primitive contraceptives, home-remedy abortion, or modern contraceptives sold privately at higher prices. To the extent that this is so, the net impact of new family planning programs on birth rates will be less than the "acceptance rates" of those programs would suggest. The importance of this substitution effect is hotly debated but too little studied. If many of the new acceptors are substituting new methods for old, then either the new contraceptives are not very attractive to those who used nothing before, or those people just aren't much interested in family planning -- a possibility that cannot be dismissed out of hand.

Still more disturbing are persistent rumors and occasional reports that not all the family-planning facilities in official programs are fully used, or close to fully used. Some programs that were successful in the beginning seem to have bogged down, possibly because they already served most of those who were highly motivated to limit their families. However that may be, clinics are not always full. True, this may be a problem of organization, or transportation, or staff -- of inadequate supply. But one cannot help raising questions suggesting further possibilities. Are the users of the clinics sufficiently interested in family planning to return? Are they advertising the clinics to their friends; and if so, do these

friends in fact want the clinic services? In other words, might lack of demand also help explain the empty waiting rooms?

Whether or not the demand is there hinges on many things. Certainly demand for family-planning services differs with the type of service -- with knowledge of and access to different types of services, particularly those associated with modernization. But demand for family-planning services of whatever type also depends on how many children parents want because they just like children or feel they need them. We know too little about the number of children parents would want given "optimal" family-planning services. We do have evidence that people in some countries are indeed having more children than they want, but also that in many places they still want more; and certainly most couples want more than the 2.1 children each that would result in population stability. People in developing countries may individually have good reasons for wanting large families even though, to their countries as a whole, burgeoning population represents a threat. The small-scale farmer in India may care little for the impact on India's development of an exploding population. He may, however, want enough children to supply labor at harvest time, or enough sons to support him in his old age and to dispose of his body according to his religious rituals. The illiterate wife of a campesino may be content to keep bearing children -- it is what she was always expected to do. If parents want many children for these reasons, their demand for family-planning services of any kind will be limited.

More needs to be done to evaluate the growing evidence that weakness in the demand for family planning may be thwarting efforts to bring down birth rates. In every country, officials designing family-planning programs worry about how many children people want and what sort of family-planning program will appeal, but there is often little systematic analysis. From available information we do know that parents want different numbers of children as their economic, social, and other conditions change. But we need to refine our understanding to determine more precisely what makes parents want smaller families. This requires careful statistical analysis, not only of demographic variables but also of economic, social, educational, psychological, and other forces that may help determine preferred family size. Until recently, family-planning programs were too new to provide the several years' records that statisticians need. But now the time is ripe. Several countries have statistical information both on their family-planning programs and on "demand influences" like income, education, health, and urbanization. The next step should be to use that information to sort out the reasons why people tend to have different numbers of children under different conditions.

But what can be done by governments, by private interests, or by aid donors to encourage smaller families? First of all, research

must be supported that will identify the pressure points with increasing sophistication, area by area, culture by culture, country by country. Research tactics can be formulated that will ensure productive and coordinated results while precluding sterile academic exercises. When the results become available, strategies can be developed for utilizing the new knowledge. It should then be possible to indicate how social and economic programs in education, in housing, in employment, in income redistribution, and in industrial and agricultural organization -- many of which would be financed on a substantial scale in any case -- could be modified to influence family size preferences as well. If better educated women have fewer children, for example, as seems generally to be the case, school programs can be designed to educate girls as well as boys. Or if working women have fewer children, as also seems frequently to be the case, job-training programs and equal opportunity laws can be encouraged. And hopefully the pressure points can be pinned down much more specifically than that.

In the meantime, however, we need not sit by and await the results of research. A variety of pilot programs should be started that may be effective in the short run, and will in any case provide the lessons from experience that are badly needed. Particularly is this true of programs that rely on financial or quasi-financial incentives, the efficacy of which can really be established only by trying them out. While there have been criticisms of some incentive programs that would pay poor people to take irrevocable family-planning decisions such as sterilization, incentive programs can be designed from a positive viewpoint. For example, they could compensate parents for the old-age security that more children would presumably have provided, and so ease the way for parents to have smaller families if they choose. Several promising pilot program experiments are already underway. Some provide old-age payments in the style of social security for parents who forego some children. Some provide education bonds for two or three children of parents who forego further fecundity, which enhances the prospects of existing children. Some simply provide a material reward to those who accept contraceptives or bring new acceptors in. Initial response has in many cases been promising. These experiments should be refined, repeated and extended. With scarce resources, we need to develop sound criteria for evaluating alternative incentive proposals (which may include short-run or long-run benefits for users or administrators, etc.) in order to compare such programs to other family-planning options.

[An unpublished paper. Opinions expressed do not necessarily reflect those of the U. S. Agency for International Development.]

Disincentives to Fertility: the Singapore Program

Peter Hall

[The Singapore government, having seen a sharp decline in national fertility in 1966-69 followed by indications of a resurgence, is building a variety of economic disincentives to fertility into its current five-year development plan. These include income taxes, maternity leaves, housing allocations, and accouchement fees.]

Recognizing early the importance of limiting its population growth, the Singapore Government through specific social legislation established a national family planning program which sought to reduce the birth rate while improving the quality and conditions of human life. After the Singapore Family Planning and Population Board (SFPPB) began its first five-year program, the number of live births fell dramatically from 54,680 in 1966 to 45,779 in 1970 and the crude birth rate from 28.6 per thousand to 22.1 per thousand during the same time period. The general fertility rate also declined from 157.5 per thousand in 1965 to 100.7 per thousand in 1970 with the program reaching 64 percent of all married women in the reproductive age group of 15-44 years.

The five-year program was accompanied by progressive social legislation on abortion and voluntary sterilization, as well as a trio of social disincentives designed to influence familial attitudes and behavior patterns towards fertility. Fertility reduction was associated with a rising per capita income and increased social benefits from membership in an industrializing society. The administration of the program,

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the improvement in socio-economic conditions, and the reduction of immigration and mortality rates together with a rising marriage age all contributed towards making the first five years of Singapore's program most successful. The reduction in the rate of population increase from 2.5 percent in 1965 to 1.7 percent in 1970 was further complemented by Singapore's tightly controlled, compact, urban environment which facilitated the extension of family planning services, the education of the public to the benefits of having a small family, and the increased use among newlyweds of planning for family spacing as well as family limitation.

However, although the program successfully achieved the First Five-Year Family Planning targets by 1970, the total number of births increased slightly to 45,562 in 1970 from 44,562 in 1969 and the crude birth rate which had fallen from 21.8 in 1969 experienced a slight increase to 22.1 in 1970, signaling the initial impact of the large number of women entering the reproductive age group as a result of the post-war "baby boom." The number of women within the reproductive age group in 1970 was almost double the number in 1965, and the number of marriages is steadily rising. Moreover, the impact of this post-war baby boom would have been more dramatic sooner if it were not for the postponement of marriage age. Of equal importance is the apparent weakening in the demand for family planning services indicated by the decline in new acceptors from over 35,000 in 1968 and 1969 to 24,230 in 1970, and the leveling off of revisits.

These trends are indicative of a population program which, having successfully extended family planning services, reduced fertility, and educated people to the benefits of family planning, is now facing second generation problems associated with a change in age structure of the population and a slackening in the number of continuing users. In order to prevent a further rise in the birth rate, Singapore will have to undertake additional measures to achieve a significant reduction in fertility among the younger couples, as well as to increase the demand for family planning services and reach the small percentage of "hard-core" resisters. Careful observation and analysis of what motivates people to have fewer children will have to be made to understand what measures will contribute to a strengthening in the demand for family planning services.

In order to set new program goals and priorities, the Minister of Health on February 21, 1972 announced the aim of the Singapore Government to achieve a more moderate fertility decline leading to a crude birth rate of 18 per thousand by 1975. With a crude death rate of approximately 5 per thousand, this would lead to a rate of natural increase of 1.3 percent, a rate almost comparable to those

of the developed countries. Priority target groups were to be defined, family planning efforts extended to the "hard-core" of resisters and newlyweds, and increasing emphasis placed on male and female surgical sterilization. Widespread publicity and motivation were to be directed at countering some of the major misconceptions and fears about sterilization, i. e., male concern for potency and female reluctance to undergo a potentially scarring operation.

In his 1972 Annual Budget Statement the Minister for Finance went further in outlining the targets of a Second Five Year Population Program. Noting the importance of promoting higher technology and a strategy of modernization in all sectors of the economy, he outlined the goals of long-term development for the 1970s. He set as the target a "sustained rapid economic growth of 15 percent per annum with a doubling of the per capita income by 1975, on the basis of a population growth checked by sensible small families." Stressing the importance of building up a large pool of professional and technical personnel through upgrading of local talents and skills and selective immigration, he indicated that Singapore would become a regional center for brain services and brain service industries, stating:

> Success will depend upon the quality of our people, their capacity to improve themselves through education, training, and experience. This is an expensive process which can only be carried out if population growth is kept down to almost Zero Population Growth. Then we can the better afford to attract expertise and technology from outside.

In a follow-up statement to the Minister of Finance's Budget speech, the Minister of Health announced in October 1972 the government's intention of discouraging parents from having more than two children by introducing tough new measures. In an apparent effort to strengthen the demand for family planning services and to reach younger couples, the Minister decreed the following specific changes in Singapore's present social policy:

(a) reduction of income tax relief in the future from the present five children to only the first three;
(b) reduction in paid maternity leave, both in government service and under the Employment Act, from three to two confinements after August 1, 1973;
(c) lower priority of allocation of Housing Development Board flats to large families (three or more children);

(d) increase in accouchement fees in Government hospitals. The new rates of accouchement charges will be as follows:

	Class A	Class B	Class C
For the 1st child	$250	$100	$ 50
For the 2nd child	300	150	75
For the 3rd child	350	150	100
For the 4th child	400	250	200
For the 5th or higher order	400	300	250

These accouchement fees which are subsidized by the government can, however, be waived on the condition that the woman or man decides to undergo sterilization. This condition will serve as a further incentive to convince people to come forward for sterilizations. It will mean that after delivery, especially if a woman already has three or more children, she or her husband can be sterilized and will not have to pay the sizeable delivery service fee. It will provide another way in which the family planning program can recruit high parity women who in the past have not accepted family planning (parity means number of children already borne).

In explaining the rationale behind the introduction of such strong disincentives, the Minister of Health linked malnutrition and physical development of Singapore's young to family size limitation according to economic means. He emphasized that parents must be aware of the costs of bringing a third, fourth and fifth child into society, saying, "We want higher quality in jobs, schools, hospitals, social and recreational amenities and in homes. The crucial precondition for fulfilling these objectives is smaller families. Only then can more resources and care be given to each child by the parents and by the state."

Although there is general agreement with the need to intensify family planning efforts, a number of members of Parliament thought the limit should be three rather than two children and felt that propaganda campaigns should be stressed instead. In responding to these comments the Minister of Health indicated that unless prompt action was taken the standards of living and quality of the environment would suffer and social friction would increase from the disparity between those small families who "would in turn do well, because of better health and social factors, and those with large families whose numerous children would do poorly because they were deprived of adequate food and care." The government thus was committed to encouraging a policy of the two-child family in all aspects of Singapore's social and economic policy.

These measures once again reaffirmed Singapore's commitment to a strong population policy closely tied to the development efforts and objectives of the small city-state. Directed primarily at lower income families, the measures considerably strengthened the negative deterrents against having more than two children and would cause parents to weigh seriously the added cost of having three or more children. They were mainly regressive in nature, primarily affecting lower income groups for whom the extra delivery service fees, reduction in paid maternity leave, and adjustment in income tax relief would impose the largest financial burden. The increased costs for the third child were greater for the cheapest ward C (33 1/3 percent) than for the most expensive ward A (16 2/3 percent). This regressiveness is somewhat softened by the provision of a range of delivery services at different prices. Moreover, the government delayed imposition of the new delivery service fees for nine and one half months to prevent them from affecting women already pregnant, and to permit couples to decide whether they wanted to have a child and pay the extra fees. The government also provided that those persons already enjoying income tax relief would continue to do so. Clearly the thrust of the new measures was directed at the younger couples who were planning their families, looking for public housing, seeking jobs and assessing their future income.

An effective population policy should not only seek ways to discourage large families but should also utilize positive measures to establish the small family norm. For example, positive financial incentives might include the provision of old-age payments to parents who forego some children. (These children presumably would have been a source of support for parents in their old age.) Negative sanctions if they are not grounded on a sound knowledge of why people act in the way they do and if they are not complemented by positive social inducements to limit family size, may be counter-productive in the long run. One of the ways of establishing effective positive incentives is to determine what the socio-economic interests and concerns of people are at the micro-level and then initiate policies which will contribute to the achievement of these interests. Careful observation should be made of the social and occupational structures, the working technology of the population, and how parents perceive family planning. Effective positive as well as negative sanctions will also require an evaluation of the impact of the family planning program as it proceeds, and a willingness to make changes in policies in the light of experience.

[Excerpted from "Legal Initiatives in Fertility Control: The Singapore Experience," Lawasia. Sydney, Australia: Butterworth & Co. Ltd., Vol. 3, Nos. 2 and 3, August-December 1972.]

The Myth of Population Control

Mahmood Mamdani

[The great majority of people in the Indian village of Manupur, Punjab, continue to believe in the economic advantages of having large families, despite their intensive exposure over several years to a pilot program in family planning. The reasons for the beliefs held by different socio-economic groups are examined.]

Much has been written about the population problem in recent years. Overpopulation is said to be the major reason for the poverty of the "underdeveloped" countries; overpopulation is the "malaise" and family planning the "remedy." Based on this conception of the problem, there was a proliferation of birth control studies in the underdeveloped countries in the 1950s and 1960s. One major birth control study was the Khanna Study, a study centered on a small north Indian village called Manupur. The Khanna Study was the first birth control program to have a control as well as a test population; it is one of only three completed birth control programs that have evaluated their impact by comparing the change in the birth rates in the test population, where the program was established, with that in a control population where no such program existed.

Generally, family planners have been optimistic about the results an intensive family planning program can achieve. The scientific basis for this optimism is the sample surveys known as KAP studies. These are standardized surveys of the views of a population on the Knowledge, Aptitude, and Practice of birth control. They have been conducted by

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population planners in numerous countries, primarily over the last two decades, and their influence on population planners cannot be overemphasized. What have their findings been? That "whenever asked, substantial proportions of married couples approve family planning in principle, express interest in learning how to control their own fertility, say they would do something if they had appropriate means, and want the government to carry out programs along these lines." But what does it mean when someone "expresses interest" in learning how to control their fertility? The uncritical acceptance of such a general response can only lead to misinterpretation.

A KAP survey was the basis of the Khanna Study's conclusion in the first year of its work that "nearly 90 percent [of the villagers] were in favor of contraception." Only after persistent failure would the study staff admit that there was a great difference in numbers between those who were in favor of contraception in principle and those who would accept contraceptives when offered; between those who "accepted" contraceptives and those who admitted to "using" them; and, finally, between those who said they were "using" contraceptives and those who in fact used them.

The Khanna Study

The Khanna Study—named after the market town where its field headquarters were located—was the first major field study in birth control in India. It was conducted in seven "test" villages, with a total population of 8,000 people. Its field operations lasted a total of six years, and the study cost approximately $1 million. In July 1953, the Harvard School of Public Health prepared a report on the "population problem" whose thesis was that although recent advances in the field of public health had resulted in spectacular and welcome declines in the death rate in poor countries, these very declines had generated another major problem: populations were rising at an unprecedented rate. The report warned that "should the present trends of population growth in several parts of the world continue unchanged for a matter of ten or even fewer years, disastrous famine is inevitable and civil unrest likely."

The Harvard sponsors proposed a long-term population field study aimed at devising methods that could later be employed to control and solve the "population problem." The first step was to decide upon a location. The state of Punjab in India, described as a major country "suffering" from "population pressure," was selected. An initial study report noted that the population density of Punjab was 20 percent higher than that of the entire country. The density of District Ludhiana, which was selected as the target area, was the highest in the Punjab, 75 percent higher than the population density

of India as a whole. Furthermore, the report noted that despite its high concentration, the birth rate for Punjab was 40 per 1,000, the same as that of India as a whole. The proposal found several sympathetic ears and a number of sponsors—the Rockefeller Foundation and the Indian government, in particular—which supplied the financing. [Omitted is a detailed outline of the project's design.]

The study was begun in April 1955 and completed in April 1960. In 1969, a follow-up study was conducted in the same region in order to analyze any late effects of the birth control program, and thus to gain a thorough understanding of the cumulative impact of the study. The follow-up study showed that the birth control program had been a failure. Although the crude birth rate of the study population was 40 per 1,000 in 1957, at the beginning of the Definitive Study, and 35 per 1,000 in 1968, this reduction could not be traced to the birth control program since it occurred among both the test and control populations. Instead, the decline had to be attributed to a rise in the age of marriage. The mean age of married women at first sexual union was 17.5 years in 1956, and more than 20 years in 1969.

The Perceptions of the Khanna Study

> But they were so nice, you know. And they came from distant lands to be with us. Couldn't we even do this much for them? Just take a few tablets? Ah! even the gods would have been angry with us. They wanted no money for the tablets. All they wanted was that we accept the tablets. I lost nothing and probably received their prayers. And they, they must have gotten some promotion.

So Hakimjee explained why many villagers had taken the contraceptive tablets, although they had not used them.

The continued financing of the Khanna Study was contingent on the success of its different phases. Only if the villagers were found "receptive" to the birth control program in the initial stage would the major study be launched. The purpose of the statistics the study accumulated was to find out how many of the villagers approached accepted contraceptives for use. Initially, the study simply assumed that "accepting" contraceptives was tantamount to "using" them. Such, however, was not the case. The directors were never totally able to grasp the difference between what the villagers said they did and what they actually did, nor why they were not always willing to admit verbally what was in fact their practice. It remains for us to understand the reasons behind this.

A person who did not accept or admitted to not using contraception was considered a "resistance" case. Every "resistance" case was to be visited at least once a month—more often if the worker took the initiative and had the time. Normally, anywhere from one-half to three-quarters of an hour was spent convincing the individual of the desirability of using contraceptives. If a person "accepted" and said that she or he "used" the contraceptives, then she or he was visited twice a month, her or his supplies replenished, and data gathered. This took, on the average, about fifteen minutes for each visit. It was clearly far more agreeable for all concerned to declare oneself a "user," or even an "acceptor," rather than a "register."

The Khanna staff had worked in the village of Manupur for five years. It had been five years of door-to-door salesmanship, of high-pitched advertising—except that in this case the product was being given away. The study staff had two duties: (1) to advertise the contraceptive method and convince people to use it, and (2) to judge the success of its own advertising by determining the acceptance rate and, later, the use rate. The conflict between the two is quite apparent. The tendency to overestimate one's results was inherent in the duties assigned to a village worker. As Dr. Sohan Singh, the assistant field director of the study, commented, "Workers thought they would be successful workers if someone accepted. If anyone accepted, we were beaming with joy: 'One more acceptance!' People used to say birth control was written on our foreheads."

The degree of suggestion that the Khanna Study staff conveyed to the village people must have been considerable. The First Annual Report was able to state that "two-thirds of the villagers contributing information (20 out of 31) expressed the ideal family to be two boys and a girl." Similarly, the report of Exploratory Investigations I declared: "Nearly 90 percent were in favor of contraception." Although the staff had a strong bias toward transmitting only favorable perceptions to the directors, there were occasional instances when the directors received unfavorable staff reports. Their response to such reports, however, was most skeptical during the first years of the study. When the distinction between acceptance and use was finally admitted, the directors (and the staff) nevertheless continued to believe that "most people want to have small families." In fact, what had happened was that the gap between the perceptions of the staff and those of the directors had been removed, but there still remained a significant gap between their collective perceptions and the reality of the village.

At the time of its full operation, the Khanna Study had a field staff of twenty. I was able to interview eleven of them, and I asked each why he or she thought the village population had not been receptive to the birth control program. Each usually offered several answers,

but one clearly predominated. Nine of the eleven responded that the villagers were either "illiterate" or "prejudiced" or that they needed some "basic education" or "demographic education." Underlying these answers, and sometimes stated explicitly, was the insistence that the villagers had acted out of ignorance. A typical response came from Dr. Prem Vir Ghulati, a supervisor of male field workers: "Education is the answer and illiteracy the curse. I keep on telling my supervisors: India's population problem will only be solved if we give some basic education to our people."

In the final analysis, there was little difference in the perceptions of the directors and the staff, of the American members and the Indian members of the Khanna Study. Except for two staff members, no one was willing to admit that the Khanna villagers might be acting rationally. The study which had worked to eliminate cultural bias had succumbed to another bias. All efforts had been expended to ensure that the field workers were all Punjabis and that the American supervisors had considerable familiarity with India. But the staff, though Punjabis like the villagers, were all members of the urban, educated middle class. What they shared with the directors was a bourgeois culture. What plagued the study was not a Western vs. Indian bias but a class bias. This bias pervaded its staff as well as its directors, without distinction of race, religion, or country of origin.

The Population Problem and the Agricultural Classes

To understand the attitudes of the various villagers, we must consider the background and the economic situations from which they develop their perceptions of reality. The traditional Punjabi village was by and large a self-sufficient community. Its economy was based on land, and a majority of the population worked either as owner-cultivators, tenant-owners, or farm laborers. A significant minority were in "service" occupations: smithery, carpentry, water carrying, etc. The allocation of labor to the various occupations was determined by birth: caste determined occupation. A child born into a specific caste inherited the corresponding occupation: the name of the different castes were the names of the occupations. All members of the village community—whether Sikh, Hindu, or Muslim—belonged to a specific caste. In this sense, caste was a traditional Indian institution, one that applied to more than just Hindus.

The farmers. It is the Jats who have traditionally been the cultivators of the land. They represent nearly 60 percent of the total village population, and by and large remain today in their traditional occupation. All of the cultivators but one in Manupur are Jats, and almost 95 percent of occupied Jats are farmers; we shall use the term to mean owner-cultivator.

From the outset, the directors of the study reasoned that the farmer would be interested in limiting his children because of his fear of the fragmentation of land: since inherited land holdings had been becoming increasingly smaller in size, it was thought that the farmer would be interested in at least slowing down this process by planning a smaller family. Furthermore, whereas in the past only male children inherited land, the situation had been radically altered by the passage of the Hindu Code Bill in 1956. This bill, by conferring equal rights of inheritance on children of both sexes, had further accelerated the pace of fragmentation.

The Khanna Study was quite right in maintaining that a major problem confronting the farmer in Punjab in general and in Manupur in particular was that of the fragmentation of land. It was not, however, the only nor the primary problem facing the farmer. Although the joint family in Manupur is increasingly breaking up, it is still true that a Jat family will stay together as an economic unit at least as long as the father lives. Sons do not leave their father's household because the only material basis for an agricultural life is the possession of land, and that becomes possible when the son inherits from the father. Thus the farmer can expect whatever land he inherits and whatever he manages to buy to remain intact during his lifetime. The problem of the fragmentation of land is the problem of the next generation, of tomorrow. The farmer's major problem is to make a living off the land in his own lifetime, to meet the costs of production in the present generation.

Although the Jats are the dominant caste, there exists a significant differentiation within the group resulting from different amounts of land owned by the various Jat families. The farmers with small holdings are the living victims of the process of land fragmentation. They stand only a few steps away from material ruin. The land they hold is already small; their total concern is with making ends meet in the present, with reducing their costs of production as much as possible. Given a very small income, to have to hire even one farm hand can mean disaster. If such a farmer is merely to survive, he must rely on his family for the necessary labor power. If he is to think of any advancement, which every farmer in such a precarious position does, he must add to his family labor force and thus augment his resources. Every farmer interviewed in this group expressed the hope that with a large enough family—especially with one spaced close together—a few children could be spared to live away from the family land, thus accumulating some savings and perhaps buying more land, land which could be worked with the manpower available within the family itself.

This hope is not totally in vein; it is, in fact, based on the knowledge that a number of such precedents exist in the village. One such case

is Mihan Singh: he and his five brothers were left with four acres when their father died. The family decided to stay together, since splitting up the land would have meant individually acquiring uneconomic plots. The six brothers farmed the four acres and rented as many more acres as they could from others. From their earnings they bought more land. Gradually, over the years, the size of their holding increased to twenty-five acres.

Per acre of land, it is the farmers with the least land who need the most labor. They are the ones least likely to have either a tubewell or a mechanical chaffcutter. As another farmer, talking of Mihan Singh and his borthers, said: "Why pay 2,500 rupees for an extra hand? Why not have a son? . . . Instead of land fragmentation, more sons increase your land." This feeling prevails among most farmers in Manupur—in fact, among all but those who have large holdings. Although the farmers with medium holdings are concerned about their sons inheriting small pieces of land and joining the ranks of the poor, they maintain that the only way out is to have enough sons who can themselves work and buy more land. Labor costs are the most variable part of a farmer's production costs, and they can be significantly lowered by having a large family. Every farmer knows that the cost of each child declines the more children he has. The benefits, on the other hand, increase. A saying among the Jats goes:

> A forest is not made of one tree.
> A Jat is not made of one son.

The calculations of the small farmer are quite similar to those of the medium-sized farmer, but the large farmer has a rather different situation. Prosperous farmers, those with seventeen or more acres of land, number fourteen (10.7 percent) in Manupur. The average amount of land owned by families in this category is 26.3 acres. Only such a family has the necessary land, revenue, and the repayment capacity to take a large enough loan from the state-owned Land Mortgage Bank to buy a tractor and embark on the road to full mechanization. Of the prosperous farmers, 35.7 percent (5 out of the 14) own tractors, whereas a mere 2.6 percent (3 out of 117) of the rest of the farmers own a tractor. The immediate result of full mechanization is to reduce the labor requirement drastically and to simultaneously increase productivity. For example, with a tractor and all the necessary implements, it takes three people—a cultivator, his son, and a farm laborer—to work fifty acres of land. Without a tractor, the same land requires at least fourteen people year round, and at least twenty at sowing, weeding, and harvesting time.

A farmer whose need for labor has been significantly reduced through mechanization attaches much more importance to the future

fragmentation of his land and its effects on the prosperity of his sons. Yet, in fact, he still has a number of children. This is for two reasons: he lives in an environment where a large family is generally considered an asset, a society that looks favorably on having many children; and, more importantly, mechanization has taken place only in this generation, so its effect on limiting the family will not be discernible at least until the next generation. It is therefore true that the newly married sons of the mechanized farmers are the Jat group most favorable to the idea of family planning through the use of modern contraception.

The farm laborers. In traditional Manupur, the caste system alone determined the allocation of labor in the village: the caste a child was born into specified the work he would do as an adult. The exchange of goods and services was conducted through a customary barter system, and here caste operated in the form of the Jajmani system, which spelled out the relations between the Jajman-the employer, of "high" caste—and those who worked for them, the Kamin—the clients, of "low" caste.

Under the Jajmani system, the Majbi (sweeper) cleaned the house of his Jajman, took away the dead animals (those under six months of age), and collected the animal dung to be used either as fertilizer or fuel. When the farmer needed extra hands, as during harvest time, the Majbi also worked in the fields. The Chamar (leather worker) was a Sanji, a year-round agricultural laborer, paid in kind, and took care of the farmer's animals and disposed of the dead ones (those above six months of age). His family ate the meat off the corpses, and he made leather from the skins and sold it to the merchant in Khanna. Both the Chamar and the Majbi were available for any menial work their Jajman needed done. They were the lowest of the low, the Achutas, the outcaste "untouchables." During the harvest season, they assisted in harvesting and in return received a bundle of grain at the end of the day. The payment aimed at assuring a bare subsistence and had little relation to the work performed.

The relationship between the mechanization of agriculture and the need for labor is a changing one, and needs to be understood for the various stages of mechanization. While the operation of the Persian wheel required both human and animal labor, the tubewell only needs supervision from one individual, and that for a short period of time. The introduction of the mechanical chaffcutter has also had the effect of eliminating the demand for one kind of labor. Other effects of the new agricultural technology, however, have more than offset this decline. The tubewell has made possible rapid and planned irrigation, a prerequisite to intensive agriculture; the introduction of chemical fertilizers and Kalyan wheat has done the same. Partial mechanization has thus intensified agricultural production, raised yields, and

increased the work load. The process has been further accentuated by the added acreage devoted to wheat. The cumulative effect of partial mechanization has been a marked rise in the demand for farm labor —although this increase is, for the most part, seasonal, that is, for the half-year devoted to weeding, sowing, and harvesting. Total mechanization—specifically, the introduction of the tractor—has begun to reverse this process, but since tractor ownership remains limited to 6 percent of the farmers, its effect is marginal.

Once we realize that the Achutas comprise the core of the agricultural labor force in Manupur today, it is easier to understand why social change has reinforced the value of the large family among agricultural laborers. First, crop-sharing—when an entire family contracts to harvest a piece of land—has led to a radical change in the composition of the labor force and in the attitudes toward girl children. Women and girls now work side by side with their husbands and brothers: the more hands a family can muster, the more land it can contract from the cultivator. The inclusion of women in the agricultural labor force means that "low" caste families do not look upon the birth of a girl baby with as much disfavor as used to be the case. However, the disfavor still persists to a degree, since the daughter will marry and emigrate precisely when she has reached the age of greatest productivity.

The second factor enhancing the attraction of the large family is the creation and proliferation of wage labor. Even where a laborer is paid in kind, the payment he receives bears a definite relation to the work he does. The Achuta is no longer tied to his Jajman for life, performing multiple tasks for a subsistence living; today he is a farm laborer who pledges his employer a certain period of services for specified wages. But this means that he is subject to the periods of employment and layoff of the labor market. Work is most intensive during the harvest, weeding, and sowing seasons, and it remains, as it has always been, labor-intensive. Thus, although there is a shortage of labor in Manupur, it exists only during specific seasons, for a little over half a year. During the other half, there is considerable unemployment; overall, farm labor in Manupur is underemployed.

But this does not mean that the farm laborer is not interested in increasing his family labor force. Quite the contrary. A larger family means a greater income during the busy season and higher savings for the slow season. During periods of low employment, farm laborers turn to the market town of Khanna and seek temporary employment there. Only a few succeed since the labor market in Khanna is a year-round market and has few temporary jobs. This leads a number—very few today, and yet a growing trend—

to leave the agricultural economy altogether and seek yearly wage labor in Khanna. But there is not even the seasonal job security there is in Manupur; the laborer is subject to the whims of his employer. It is only those from large families, who have resources to fall back on, who hazard such a move.

The Service Sector

The "new" technology in Manupur primarily affected the agricultural sector, and the resulting prosperity has led to the introduction of other advanced technology among the cultivating households. Its effect on many of the noncultivating households, on the other hand, has been catastrophic. Life has changed abruptly and cruelly. The introduction of a single innovation— for instance, the sewing machine— has totally destoryed the material base of many families' existence. The history of Manupur in the last two decades is in part the history of the struggle of those not involved in agriculture to maintain some continuity in their lives in the face of a new wind.

Marasi and Jheevar: the "new" agricultural proletariat. These are two members of the traditional "low" castes in Manupur whose occupations have been rendered totally obsolete as a result of technological change. In all, there are fifty-three Jheevar (water carriers) and sixteen Marasi (drum beaters). The water carrier has lost his job to the water pump. The drum beater is no longer needed now that the Gurudwaras (Sikh houses of worship) have equipped themselves with loudspeakers.

A lack of material resources or marketable skills rules out emigration as a feasible alternative for these people. The logical decision would be to join the agricultural labor force, for it is here that the village economy gives the greatest rewards to its "low" castes. This, however, has not been possible. Their familiarity with agricultural work and their skills in the field are nonexistent. And even if they desired to enter the agricultural economy, they could not: the Jats need them to perform those tasks— such as being messengers to other villages— that no one else in the village would agree to do. The work is menial, time-consuming, and degrading, but the Jats are the "masters." A member of a small, financially weak group such as the water carriers would be foolish to displease his Jat and incur his wrath. It could make his life in the village impossible and emigration his only alternative.

Fortunately, the same situation does not apply to their offspring. A child can perform a variety of unskilled tasks, such as collecting manure for the farmer or tending his cattle. He can begin with light agricultural work at a tender age and learn through experience. The son can join the agricultural proletariat and bring a modicum of

material reward and happiness to his parents. The families of these groups are therefore usually large.

Fakir Singh, for example, is a traditional water carrier. After he lost his job, he remained as a messenger for those Jat families which used to be his Jajmans, barely earning a subsistence living. He has eleven children, ranging in age from twenty-five to four. He says he told the Khanna Study workers he was "using" the foam tablets. When government family-planning workers later contacted him, he agreed to have a vasectomy, but repeatedly failed to appear on the appointed day, giving a more or less convincing excuse when approached again. Fakir Singh maintains that every one of his sons is an asset. The youngest one—aged five or six—collects hay for the cattle; the older ones tend those same cattle. Between the ages of six and sixteen, they earn 150 to 200 rupees a year, plus all their meals and necessary clothing. Those sons over sixteen earn 2,000 rupees and meals every year. Fakir Singh smiles and adds: "To raise children may be difficult, but once they are older it is a sea of happiness."

Lohar-Tarkhan. The occupations of Lohar (blacksmith) and Tarkhan (carpenter) have traditionally been the preserve of one individual. He used to repair the agricultural tools of his Jajman cultivators, but tools are no longer as simple as they used to be, and the skills of the smith have hardly kept pace with the change in agricultural technology. Chaffing machines are used for both sugarcane and fodder; the tractor is beginning to replace the plough. Some farmers have begun to take their tools into Khanna for repairs; others, faced with the high cost of repairs in town, have begun to learn to make at least minor repairs themselves.

The blacksmith might seem to represent an ideal type for the family planner, a textbook case of a group "suffering" from "population pressure:" work has decreased while numbers have increased; since work cannot be increased, the equation can only be balanced by reducing their numbers to make them commensurate with the available work. The smith in Manupur doesn't reason this way. I posed the dilemma and the corresponding "solution" to Hakika Singh, who has perhaps suffered most from the drastic decline in smithy work. Today he serves five farmers, as opposed to the fifty or so his father used to serve, and can barely earn a subsistence living. Here is the gist of Hakika Singh's response to my query:

> If things stay the same, the farmers will keep on going to Khanna to get their work done. I will lose even what I have. Unless I am to leave this village, I must teach my sons to repair the new machines and maybe even get some machinery

> [tools] myself. The problem is I have no money, and the Cooperative Society only loans to farmers. So there is only one way out. And that is to have enough sons. Don't smile. If I have sons, they will work outside, labor even as animals do, but save. While the rest work, one son will learn the new skills. And maybe we will even be able to get some machinery with the savings of the other sons. And, you know, if we learn how to do it, there really is enough work in this village.

To Hakika Singh, the solution to his financial troubles is not to reduce the size of the family he has to support, but to *increase* it. It is the family that will support him, will even be his salvation.

Darzi and Nai: large families for educational security. The barber and the tailor can be added to the list of "victims" of the farmer's prosperity. Although traditionally "low" in the caste hierarchy, the *Nai* (barber) and the *Darzi* (tailor) were the most prosperous of the "low" castes in the village. The barber's traditionally trimmed the farmer's hair. He gave haircuts to the Brahmins and cut their fingernails and toenails. His wife shampooed their wives' hair. Now the farmer buys his own razor and his wife buys her shampoo. In Manupur today, the heads of all four barber families no longer cut hair, but remain as messengers for the Jats, earning barely a quarter of their previous income — which means only meals.

The tailor's earnings came from selling cloth and making clothes for the Brahmins and the farmers. His work brought him in frequent contact with Khanna, where he bought most of his cloth. He thus had to be literate, and he had to have a rudimentary knowledge of accounts. He also used to be a petty moneylender, but government financing for farmers destroyed all other forms of money lending in Manupur. The presence of the sewing machine in practically every upper-class household made the tailor unnecessary. Of the five heads of tailor families, two are now teachers and one is a cloth salesman in Khanna. The remaining two, the oldest ones, remain as tailors, but both must supplement their incomes through some other form of labor, be it repairing bicycles or selling sweets to children.

Both the tailor and the barber are today involved in a desperate struggle to adjust to the new life and to somehow maintain their traditional income and status. The parents are therefore determined to acquire marketable skills (meaning an education) for their sons so that they can either get a skilled job in the village (such as teaching) or can emigrate to the town. In this, the Darzi and the Nai are similar to the rest of the service castes in Manupur: they all want to have enough children to accumulate savings. But the case of

the tailor and the barber is particularly interesting because it goes against another widely accepted "truth" among family planners: that families who want education, and particularly higher education, for their children will limit their families because higher education is expensive and, therefore, to have many children is expensive. Family planning should thus mean substantial savings and should be a rational decision for these parents.

The tailor and the barber reason the opposite way. To begin with, most families have either little or no savings, and they can earn too little able to finance the education of any children, even through high school. Another source of income must be found, and the only solution is, as one tailor told me, "to have enough children so that there are at least three or four sons in the family." Then each son can finish high school by spending a part of his afternoon working for a farmer and earning at least his meals. After high school, one son is sent on to college while the others work to save and pay the necessary fees. During the summer, the college son works and earns at least a part of his expenses. Once his education is completed, he will use his increased earnings to put his brother through college. He will not marry until the second brother has finished his college education and can carry the burden of educating the third brother.

Take the case of Makan Singh, a barber. Makan Singh has five sons and two daughters. One daughter is high-school educated and married; the other is in Grade 8. The three eldest sons have already been educated (one has a B. A. and is a teacher, another has an M. A. and is a teacher, and the third has a B. A. and is a civil servant). Significantly, the third son, though thirty years old, is unmarried. Makan Singh told me emphatically that he will remain unmarried until he has put his younger brother, who is a first-year student, through college. The same responsibility will then fall upon the fourth brother since the youngest, who is now in Grade 7, will then be ready to go to college.

Instances of family planning among the barber and tailor families are rare, and when they do occur, it is only after the family has had "enough" sons. This is in spite of the fact that the heads— not just the sons— of tailor families are among the most educated in the village. For example, Ajaib Singh holds a B. A. and is a teacher in the nearby village. He has recently undergone a vasectomy, but only after having seven children—among them five sons. For them, education in itself gives no indication of a positive response to the prospect of a small family, although the generally very late age at which a son marries (usually in his thirties) will mean that his family will probably be smaller.

The Brahmins: the declining aristocracy. In the days of British rule, a small number of Brahmin families constituted a conspicuous economic and social elite in Manupur. Their great wealth derived chiefly from moneylending, supplemented by wholesale trade and by their monopoly of activities requiring higher education. Today, for a variety of reasons, most prominently the availability of low cost loans to farmers through the government-sponsored cooperative, their economic position has been drastically reduced as has their social standing. The results of shifts in the last two decades have been sharp and painful.

The Brahmins estimate that in 1920 there were about fifty Brahmin families in Manupur. Today only sixteen (4.3 percent of the village population) remain. Unlike the tailors and the barbers, the Brahmins had both education and considerable savings. In the face of adversity, immediate emigration was a feasible alternative, and those families which could went to seek work elsewhere. Even the remaining families have been split: the able-bodied have emigrated; the sick, aged, not-so-well-off, and not-so-well-educated have been left behind to struggle to maintain a semblance of their customary status, privilege, and income. This means, as one Brahmin explained, having to "work in un-Brahmin professions." It also means holding a number of jobs at one time, for outside the agricultural economy there are few jobs which can alone provide any more than a bare subsistence. Of the Brahmin families that remain in Manupur, 35 percent of the earning members work in Manupur and 65 percent work elsewhere. Of those working in Manupur—including the priests—46 percent are small shopkeepers.

There is a difference between the attitude of the Brahmin and that of the tailor and the barber. Where the tailor is willing to have younger sons work for the farmer or do other menial work so that his elder son can be educated, the Brahmin looks with utter disdain and fear upon the prospect of farm labor. Letting his children work for the farmer—who is lower in the caste hierarchy—would be the clearest admission of the decline of the Brahmin aristocracy. Of all the castes, they have gone through the most drastic changes and feel most acutely the uncertainty of the future. As a result, they put tremendous emphasis upon thrift and savings, on the need for financial security for the family and educational security for the children. Their children, both boys and girls, are apt to be the most educated, even beyond high school. Along with the tailors and the barbers, they marry the latest and emigrate the most often. Unlike the tailors and the barbers, however, they are likely to see the greatest advantage in family planning.

How the Villagers See Birth Control

The majority in Manupur found it difficult to believe that the Khanna Study had actually come to introduce contraceptive practices. Even though the Khanna Study was a reality obvious to all, even though its staff lived in the village for a number of years, and even though the whole enterprise "must have cost an incredible amount of money," the majority of the villagers never understood why so much money and effort were being spent on family planning when "surely everybody knows that children are a necessity in life." The villagers searched for "the clue" to what the Khanna Study was "really doing." Every detail of what the study members did was watched suspiciously. One Khanna report states: "Serious difficulties sometimes have attended seemingly minor matters. Despite careful preparation of the village authorities, mapping of the village gave rise to uncontrollable rumors of a rise in taxes, another war, or that the village was to be moved."

The Khanna Study conscientiously searched for "cultural factors" that might have led to this "misunderstanding." The most obvious seemed the presence in the village of an Englishman as the study spokesman, and so "the task of explaining our work and motives was delegated to the assistant field director, himself a Sikh and a Punjabi." There was little improvement.

To the directors of the Khanna Study, this was evidence of a communications problem: that the "right" leaders had not been contacted, that the "right" kind of information had not been given out. Yet it is clear that there were no leaders, that the whole enterprise seemed fantastic to almost everybody. Furthermore, it was precisely the "right" kind of information—stating that birth control and family planning were the real purposes of the Khanna Study—that the people found most incredible. It should be no surprise that an increased dosage of the same did little to benefit the study. Thus, the Pilot Study report concluded: "Suspicion remained our worst enemy throughout, though as time went on the village people did come to trust us more."

To be sure, there are people in Manupur who will echo the family planning views of the outsider. These people maintain that the farmer should be afraid of land fragmentation and should thus limit his family, that he should realize that "population pressure" exists and should thus be motivated to use family planning. They explain the hostility of the agricultural population to family planning with the escape clause: "They are ignorant, you know." Those who think this way come either from among the few who own large and mechanized farms or from those who are outside of the agricultural

economy: a teacher, a family-planning worker, or an ex-money-lender. They either forget, or do not realize, that their own material circumstances have led them to limit their families. Although they live in Manupur, they share the views of the Khanna Study directors and a majority of its staff. It is here that the class basis of perceptions becomes evident.

One man was an exception to this class prejudice in Manupur. He was Pandit Pritamdasji, a fifty-year-old Brahmin who worked as a clerk at the school, an educated man who had left the village in pre-independence days to fight with the Indian National Army against the British colonial government. In one of our many discussions, he said: "Africa has on the average 90 persons per square mile, very little population, and no population pressure. Yet it is poor. We are not poor because of our numbers. The reason is another. . . . " What this reason is penetrates much deeper into the structure of Indian society than this essay can go.

[Excerpted from The Myth of Population Control, New York: Monthly Review Press, 1972, pp. 13-15, 18-19, 23-28, 30-35, 47-48, 66-69, 72-77, 85-90, 94-96, 105, 107-109, 112-119, 121, 124-125, 144-148.]

Smaller Families Through Jobs and Justice

William Rich

[Fertility declines have occurred in some developing countries where per capita incomes are well below those which accompanies the fertility decreases in Western countries. In these developing countries, the distribution of incomes and social services tends to be more equitable than elsewhere. This suggests that development strategies stressing equity can ease population problems.]

Demographers have long known that with sufficient economic progress high birth rates fall sharply. The experience of Europe and North America in the past fifty years amply demonstrates the change in birth rates that results from such progress. But since that reduction in births occurred over a long period and at relatively high income levels, it seemed to have little or no short-term relevance in the context of the extreme poverty that still characterizes most less developed countries. In recent years, however, birth rates have dropped sharply <u>despite</u> relatively low per capita income figures, and <u>despite</u> the absence or relative newness of family planning programs, in an increasing number of developing countries and in regions within some larger countries. Examination of these cases reveals a common factor: these are the countries in which the population as a whole has shared in the economic and social benefits of progress to a far greater degree than in most— and more so than in Western countries during their comparable period of development. In addition, family planning programs seem to be much more successful

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in those developing countries which have assigned high priority in their development to a more equitable distribution of income and social services.

Despite unprecedented increases in output in most developing countries over the past decade, the problems of joblessness, malnutrition and disease, illiteracy, and income inequality generally did not subside. This failure of traditional development models has in part been conditioned by the rapid growth of population. Further, the traditional development models have failed to slow population growth. For the most part, only a small elite has started to practice fertility control in those countries which have followed a "traditional" approach to development. This small elite is generally the group that has benefited the most from the modern social and economic system. The remainder of the society, at a subsistence standard of living, accounts for the high average birth rate.

There is evidence that a stepped up rate of growth, greater economic and social justice, and a lower rate of population growth need not be incompatible policy goals. This is not to suggest that the development problems of the Third World can be solved through across-the-board application of any single socio-economic formula. The evidence does, however, indicate that some countries have found an appropriate mix of policies to improve the well-being of the society at large, accelerate economic growth, and curtail the birth rate sim simultaneously. Some aspects of their experience may be relevant for others.

Development Strategy and Reduced Population Growth

There are many reasons why birth rates are affected by improved welfare. As one example, the spread of education contributes to the motivation for reduced family size. Changes which occur in the norms and values of educated persons as they learn to question traditional practices of their parents can affect their attitudes toward family size. Education and literacy can also make information about birth control techniques more accessible. The correlation between small family size and female education is particularly high; as women gain independent social status, they become increasingly active outside the home, and are inclined to limit family size as a result. Moreover, extended education tends to delay marriage. It also generally lengthens the period during which the child is dependent on parental support. As education becomes available— at a cost— many parents will have to decide whether to have fewer children with, or more without, an education.

While it is true that health services, accompanied by improvements in nutrition, sanitation, and education have helped to reduce death rates, it is also certain that expanded health services contribute, albeit more slowly, to birth rate reduction. These services offer a natural springboard for family planning programs. Even more important, in many countries high survival rates for children must be assured before it can be expected that births will be limited. Widespread availability of employment is another factor which, at least indirectly, influences the birth rate as well as being the key to improved welfare. Where job opportunities are ample, women who work can add to family and national income without being resented as they would be when they get scarce jobs desired by the men. Women who work may postpone marriage, postpone having children, or decide to have only one or two. This trend is particularly noticeable in much of the Far East as well as in several Islamic societies. Sending children to school instead of to work can also affect family size. As child labor practices change, the cost of rearing children increases.

At this stage it certainly is not possible to define the relationship between development and population growth in precise mathematical terms, but research has made it possible to focus on the general shape of this relationship. Decisions affecting family size within a range of alternatives can, in general terms, be related to the distribution of socio-economic goods or services among the population.

A look at the relationship of education levels to fertility illustrates this approach. In most developing countries, the majority of the population has little, if any, education, and the birth rate is high. Changes in family size among those who are more educated cannot be expected to have much effect on the population growth rate, and this small segment of the population already shows a lower than average number of births per family. The accompanying table illustrates the relation of educational and fertility levels in one rural setting.

Table 1: The Relationship Between Educational Level and Fertility in Cauquenes, Chile

Education Level of Women Interviewed	Average No. of Births Per Couple	Percent of Population
No formal education	4.86	20.2
Some primary school	3.40	48.3
Complete primary school	1.26	13.1
Some secondary school	1.21	14.4
Complete secondary school	1.69	4.0

Source: Carmen Miro and Walter Mertens, "Influences Affecting Fertility in Urban and Rural Latin America," Millbank Memorial Fund Quarterly, July, 1968, p. 105.

The pattern found in this area of Chile is typical of that found in many parts of the world. The 68 percent of the adult population without primary education in Cauquenes has 87 percent of the children in the village area. Reductions in population growth must result from changes which affect this group, and only when a large portion of a national population gains access to modern social and economic services—such as education, health and employment for women, or credit for modern farming techniques—are changes in family size likely to follow.

The Cumulative Effect of Appropriate Development Policies on the Birth Rate

The myth has long persisted that a "threshold" for acceptance of family planning can only be crossed when a country has achieved an annual per capita income of $1,000 or more. Recent evidence in some developing countries makes it increasingly clear, however, that this threshold estimate is much too high. In South Korea, for example, births began dropping rapidly when the average income level was still below $200. In other cases including Korea, Barbados, Taiwan, Mauritius, Hong Kong, the Indian Punjab, Singapore, parts of Egypt, Costa Rica, and possibly China, birth rates have begun to drop at relatively low levels of income. In all of these cases, the reductions in births began prior to the introduction of active family planning programs and seemed to be related to social and economic policies implemented in these countries.

It seems that the appropriate mix of development policies concentrating on the improvement of the welfare of the low-income majority may be more relevant for checking population growth than the attainment of any absolute "threshold" of average income. Improvements in credit and job opportunities for the poor seem to be important components of such a successful mix. Take, for example, two countries where overall growth was unusually successful. In Taiwan, due to land and labor policy reforms, the poorest 20 percent of the population improved its average annual income by over 200 percent in the last two decades; while in Mexico the real income level of the poorest 20 percent actually fell. In Taiwan, incomes are relatively evenly distributed, health services have extended throughout rural areas, and effective primary education is accessible to virtually all of the population. In Mexico, average income is almost double that in Taiwan, but the distribution of benefits is limited and social services appear to be poorly shared. As a result, the income of the poorest 20 percent of the population is higher in Taiwan than in Mexico, and the "real income" including measures for health and education is noticeably higher in Taiwan.

Keeping in mind these differences, it is interesting to note that in Taiwan the birth rate dropped from 46 per thousand in 1952 to 31 in

1963, at which time a vigorous family planning program was introduced. It continued falling thereafter to 26 per thousand in 1970. In Mexico the birth rate only declined from 44 per thousand to 42 per thousand from 1952 to 1970. While the birth rate is declining in a few areas of greatest progress, this trend has not yet affected the majority of the Mexican population.

Alternative ways of delivering social services also figure importantly in whether or not a development policy has significant impact on the low income— and high birth rate—majority of the population. The contrast in health systems between Ceylon and Turkey (or that between China and Taiwan on the one hand and Brazil and Mexico on the other) demonstrates extreme differences in the delivery of health services and the far greater beneficial return on the expenditures by the Sinhalese. Both Ceylon and Turkey, for example, devote about the same level of per capita public funds to health services. In Ceylon, however, the emphasis has been on training paramedics who have delivered basic modern treatment for routine health problems to the entire rural and urban population. The improvements in national health in the last two decades have been dramatic. What is especially noteworthy about Ceylon's experience is that decreases in mortality have been closely paralleled by a reduction in births. In Turkey, on the other hand, efforts have been made to copy Western health systems. While affluent urban families obtained readier access to a modern hospital and a well-trained doctor, in most rural areas there still were more than 10,000 residents per doctor and few paramedics were available to supply minimal health services. Thus in Turkey, the infant mortality rate remained over twice as high as, and life expectancy much less than, the comparable figures for Ceylon, despite Turkey's far higher per capita income. Turkey's birth rate remains at a high level.

Education strategies also differ widely, and the following contrasts between South Korea and Brazil illustrate the extremes—again, in two countries with very high growth rates in recent years. The dispersal of public funds in South Korea makes the educational system in that country accessible to a wider segment of the total population than is the case in Brazil. According to government sources, in 1970 two-thirds of Korea's population of children aged 5 to 14 were in primary school, while in Brazil only half of the same age group were in school, despite that country's much higher per capita income. The following table presents selective indicators of conditions in the two countries for comparison:

Table 2: Selected Indicators, South Korea and Brazil

		South Korea	Brazil
Population Growth Rates	1958	3. 0%	3. 0%
	1964	2. 7%	2. 9%
	1971	2. 0%	2. 8%
Income per capita (1971)		$280	$395
GNP growth rates in the 1960s		9%	6%
Ratio of income, richest 20 % to poorest 20 % (1970)		5 to 1	25 to 1
Literacy (1970)		71%	61%
Infant deaths per 1,000 births (1970)		41	94
Joblessness		negligible	serious
Effective land reform		Yes	No
Family planning program		Yes	No

In South Korea the birth rate dropped from 45 per thousand in 1958 to 38 per thousand in 1964, by which time a family planning program had been implemented. The birth rate fell even faster thereafter, to about 30 per thousand in 1971, which reduced the population growth rate to approximately two per cent. In Brazil, on the other hand, the birth rate only declined from about 42 per thousand to 38 per thousand during the period 1958 to 1971. As in Mexico, the decreasing trend has not affected the majority of the population. Highly uneven distribution of income and social services, as well as religious constraints and a lack of government support for family planning programs, have all contributed to the maintenance of Brazil's high population growth rate.

Conclusions

The effect on fertility of any single policy measure may not by itself be of great significance, but development policies that focus on participation and increased access to benefits for the population as a whole do seem to have a major impact on family size. Some objections to this thesis should be noted, however. High population growth rates continue most dramatically in Latin America despite the region's relatively high per capita incomes; and the most successful examples of equitable income distribution and rapidly declining birth rates are

in countries with low per capita incomes in East Asia. This has led many to say that Catholicism is the dominant reason for the former, and that Chinese cultural attributes are responsible for the latter.

Obviously, religious and cultural variables have an impact on attitudes toward family size. However, comparable economic and social factors, and policies affecting them can be shown to have roughly comparable effects in different religious and cultural settings. Thus, there is a significant correlation between education and fertility in Catholic Chile, just as there is in the East Asian countries. We know that Catholic France has long had low birth rates, and that the relatively more prosperous Catholic North of Yugoslavia has developed significantly lower birth rates than Yugoslavia's much poorer Muslim South. With regard to the alleged Chinese cultural influence, it bears remembering that similar improvements in education, health, income, and jobs have apparently had similar demographic effects on the Singhalese in Ceylon, Indians and Tamils in Singapore, blacks in Barbados, and Punjabis in India, that they have had on Chinese in East Asia. There is need for much more research on the impact of cultural and religious factors on birth rates, but it is clear that improved availability of jobs, income, and social services can significantly affect attitudes toward family size in many societies.

In the past, development planners have treated the problems outlined above as if they were balanced on the horns of a dilemma. Rapid economic growth and more widespread distribution of income and services were held to be incompatible goals; improvements in health and welfare were considered to be the cause of rapid population growth. Many feared that the problems of a population explosion could not be dealt with without suspending other improvements in social welfare. However, a new look at these questions indicates the potential for a complementarity among increased social justice, economic growth, and less rapid population growth.

[Excerpted from "Smaller Families Through Jobs and Justice," International Development Review. Washington, D.C.: Society for International Development, Vol. XIV, No. 3, 1972/3, pp. 10-15. Copyright © 1972 by the Society for International Development.]

Status of Women and Fertility

International Planned
Parenthood Federation

[Aspects of the status of women that affect their fertility include educational levels, employment, and positions within the family. But the first two do not provide as clear and reliable a relationship as is commonly thought, and it is only by specifying the socio-economic environment and by positing the family status of women as an intervening variable that the statistical findings on fertility levels can be explained.]

There is evidence that a relationship exists between the status of women and their fertility. In order to establish how this relationship functions, it is necessary to look at certain variables affecting the status of women, and then try to determine how these influence fertility. Those variables which are most influential in affecting fertility are: level of education, employment, and type of family organization.

Education

Most studies have found an inverse relationship between a woman's level of education and her fertility, but others have found that more education does not automatically lead to a reduction in the number of children desired. Formal schooling beyond the primary level has some effect upon fertility merely by delaying marriage and the first birth, although delaying the first birth does not always lead to a smaller completed family size. Longer school attendances also prevent children from fulfilling many household duties. In some societies where it is customary for children to care for new babies, increased school attendance may mean the absence of these older children from the home, leaving no one to care for the new babies if the mother already has some outside employment.

Statistics from the Turkish Demographic Survey (1966-67), for example, revealed that within each age group and for nearly all areas mothers with the highest birth rates were those who had not graduated from any school. In addition, the birth rates generally decreased as the level of education increased. In Puerto Rico, a marked fertility differential by education was found, but major declines in the birth rate occurred only among those who had completed elementary school. A study by Chung, Palmore and Lee in Korea in 1972 revealed a strong relationship between level of education and fertility. High school educated women bore an average of 2.05 children while those women with no education averaged 4.28. Similarly, in Mysore, India, those women educated through high school had fewer children than those who had only primary school education or were illiterate.

In Turkey, Stycos and Weller found that, while in the rural areas neither employment nor schooling was related to fertility, in the urban areas fertility was differentiated quite clearly by schooling. Stycos suggests that while those Latin American countries with the highest education levels also have the lowest birth rates, this can be largely explained by greater urbanization in some of the countries. He indicates that a certain amount of urbanization may be necessary to activate the effect of education on fertility.

For developed countries, where contraceptives are in greater supply and more widely known by the less educated, some studies have shown higher education not to be associated with low fertility. A 1957 report indicated that women with a high level of education had fewer children during the first five years of marriage, but that their later fertility was equal to or even higher than average. These findings suggest cultural and economic factors that also affect motivation for a particular family size. If, for example, a society places great emphasis on motherhood, or a high value of sons, these cultural values may override any expected effect of education.

Women's Employment and Fertility

For development planners concerned with slowing down the rate of population growth, the existence of an inverse relationship between fertility and female labor-force participation would have significant implications. However, if the relationship exists, it is not simple. Evidence both supporting and denying the relationship exists. Sociologists have tried to explain the relationship between female employment and fertility by a theory of role incompatibility. The theory holds that as the role of worker approaches incompatibility with the role of mother, the woman's desire for children declines. This theory seems to be applicable only in highly-developed societies or elite sections of developing societies.

In 1968, R.H. Weller carried out a study of role incompatibility among lower and middle class residents of San Juan, Puerto Rico,

in which four factors were used to help in assessing the degree of incompatibility. He found that incompatibility was more likely to appear when: 1) Young children are not cared for by relatives, so there are greater financial and social costs to consider; 2) Women work in white collar or professional office jobs. According to Weller, these women are likely to be contributing substantially to the family income, and they would have to forego that income to have another child; 3) The woman is in the labor-force, but she does not feel it is "all right" for a woman to work outside the home if she is married and has children, and 4) Where there is a joint occurrence of one or more of these factors. He found that a high score on the index of role incompatibility is associated with high education and high income, suggesting that role incompatibility may be related positively to socio-economic status.

This latter finding may explain, at least in part, why some researchers have found that there is a consistent inverse relationship between nonfamiliar labor-force participation and fertility for highly developed countries, but that the relationship is inconsistent or nonexistent in a number of developing countries. The inverse relationship in highly developed societies may be explained further by the fact that involvement in employment often leads to a later age of marriage, that contraceptives are more readily available to women in this group, and that subfecund women tend to seek employment.

<u>The effect of female employment on fertility in rural areas.</u> There is little evidence to suggest that women living in rural areas and employed on the land in developing countries, or in traditional rural sectors of the more developed countries, show a strong desire to have small families. These are areas where life expectancy is relatively low and where the extended family is the norm. Children in this type of society are a potential source of security, providing help on the land and ensuring some support in old age. Due to the extended family structure, it is relatively easy for a mother to find relatives to care for her small children while she works. Her work opportunities are confined almost entirely to agricultural labor or work in handicrafts, which do not impose restrictions on her family life because they are performed at home. Thus, the notion that the introduction of traditional job opportunities for women in rural areas of developing countries would inevitably lead to reduction in fertility rates resulting from incompatibility of roles, or a rise in the age of marriage, is unrealistic. Although the desire for fewer children may exist in some cases, traditional attitudes towards family size, ignorance of family planning, and the lack of education leading to lack of opportunities and aspirations are dominant factors influencing fertility patterns, and may serve to negate any restrictive influence on fertility that employment might otherwise have.

<u>The effect of female employment in urban areas.</u> Studies of selected groups of semi-skilled and service workers in Lima, Peru,

and Old Delhi, India, have found that the average family size of the working women corresponded exactly with that of the unemployed females in the same areas. In these cases employment per se exercised no direct effect on fertility. The age at marriage had not been raised through employment, and the incompatibility of women's roles in working and childbearing did not seem to be important. Thus, it seems that employment in the lower socio-economic sectors of society in both rural and urban areas has no direct effect on fertility.

The association between education and employment. The mere fact of working outside the home does not seem related to smaller family size, and increased participation in the work-force alone will not lead to significantly reduced fertility among the uneducated. If, however, the associated variable of education is introduced, the pattern becomes different. For example, the Old Delhi study compared two groups of married women working outside the home, and found that an educated group of primary and secondary school teachers had an average 2.6 fewer children than the uneducated group, represented by mill and hospital workers.

Education is important in influencing the type of work available to the potential female worker. It also influences her aspirations and often her desire to limit her family. Assuming that contraceptives are readily available she is more likely to make use of them. Even if contraceptives are not available, she is likely to have fewer children than her uneducated counterpart and will resort to abortion if necessary. Many women will seek employment in order to raise the standard of living of their families. If women are motivated in this way, they are very likely to be conscious of wanting to do the best for their children, which naturally means that they do not have more than they can afford to bring up "well."

Family Organization

One difficulty in trying to relate certain aspects of modernization - such as education and employment directly to an individual's fertility, is that it is through their influence on the family organization that they affect fertility decisions and behavior. The orientation of the family (traditional or modern), the flexibility of the family organization, the decision-making patterns, and particularly the autonomy of the wife, all appear to be important intervening variables in control of an individual's fertility. These intervening variables are affected not only by education and employment but also by historical and environmental pressures which can negate the positive effects of education and employment in controlling fertility. The orientation, organization and decision-making patterns within the family not only contribute to family size attitudes but also contribute significantly to the achievement or non-achievement of stated family size preferences.

In many areas of the world, individuals already desire smaller families. In a study of the characteristics of those people wanting a particular family size and the reasons for the achievement or non-achievement of that goal, a study in Puerto Rico classified individuals on a family-oriented versus individual-oriented scale which was based on characteristics of the family organization and reflected the autonomy of the wife. On this scale, "restrictiveness" of family type was negatively related to desire for large families. Among the families with high husband dominance there was higher fertility, insufficient fertility planning and greater contraceptive failure. A higher proportion had never used birth control, and there were also more irregular and more short-term users among those who had. These people had a large number of children despite their stated preference for a small family. Communication about birth control within the restrictive family types was much lower, and although smaller families were preferred, family size was perceived as a problem later than in the less restrictive types. These families were also not as well organized for action and less likely to act upon the decision that they had enough children.

The influence of the wife. Greater influence of the wife in family decision-making is associated with lower fertility. A 1972 study by R. E. Mitchell of family planning practices in Hong Kong found, among families who did not want more children, that the greater the influence the wife had over matters in the family the more likely she was to practice family planning. He also found that when the desires of the husband and wife for more children conflicted, the husband's wishes were more likely to have the greater influence in the decision whether to adopt family planning. Weller found in 1968 that, while knowledge of contraceptive methods was not related to the type of family decision-making, their effective use was greatest among couples with less dominant husbands. In Brazil, a 1971 study by Rosen and Simmons suggested that equality in family decision-making, skilled employment, greater social participation and higher educational attainment on the part of the wife were associated with lower fertility.

The wife's decision-making role is affected by her participation in the labor-force, that is, working wives have a greater part in decisions, particularly those concerned with family size. Thus, it is the family decison-making process that is the intervening variable between the wife's employment status and family size. In addition, one of the most influential outside factors affecting the family decision-making process is the education of the wife. Restrictive family types are positively related to the low education of the husband, and an educated woman is even less likely to be a member of a restrictive family unit. It has also been found that women who attended school were much more effective in solving their fertility problems than those who had never attended school.

Verbal communication between husband and wife was also found by Mitchell to be important in the adoption of family planning. In Hong Kong, couples with high levels of verbal communication, a characteristic associated with high education and income, were most likely to practice family planning. However, communication levels are not significant in differentiating fertility for women of higher socio-economic status, rather they become important in families with low education and income. In other words, where there is no influence from education and income, verbal communication becomes an important factor in the adoption of family planning. The increased communication between spouse and equality in decision-making usually found in less restrictive families and those with higher socio-economic status, may be an important influence of education.

In sum, the research so far indicates that the organization and decision-making pattern of the family is the best single predicter of family planning practice. It is evident that the autonomy and influence of the wife has a very significant contribution to make to this decision-making process, and that education and employment of the wife are associated with her greater influence in the family.

[Excerpted from "Status of Women and Fertility: Paper Prepared by the International Planned Parenthood Federation," for the United Nations Seminar on the Status of Women and Family Planning, Istanbul, Turkey, 11-24 July, 1972.]

NOTE: A revised version of this paper was published by K. B. Piepmeier and T. S. Adkins in the Journal of Biosocial Science, Vol. 5, pp. 507 - 520, 1973. The excerpts above do not reflect any of the revisions since the published version became available to the Development Digest as this issue was going to press.

Family Planning in Latin America

Editors of Comercio Exterior de Mexico

[In Latin America there are wide variations in national attitudes toward family planning, and also a wide range of fertility rates. Population policies should be geared to overall national development objectives.]

At the start of the 1960s only two countries in the world had set up national family-planning programs. The idea gradually acquired such force that by 1972 at least 28 developing countries had adopted some form of population control. At present there are several possible classifications of Latin American countries, in terms of their attitudes toward family planning. The first group would include Colombia, the Dominican Republic, Guatemala, Honduras and certain English-speaking Caribbean countries in which programming aims at reducing the birth rate and, in consequence, lowering demographic growth (provided the combined effect of death and birth rate decline produces this result).

The second, more numerous group, would contain Chile, Costa Rica, Cuba, Ecuador, El Salvador, Haiti and Mexico, where governments support family-planning activities through their public health services. In this case the target is not a reduction in the birth rate, but family welfare, a decrease in mother-child mortality and so forth. Actually, Mexico does not fit into this group inasmuch as the government recently called for a curb on population expansion, attributing to responsible parenthood and

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family planning the same objectives pursued by the countries in the first group. Mexico, it should be noted, has not yet defined a true population policy, which would be really effective only in the context of a general national development program, about which more will be said later.

A third group would be made up of Argentina, Bolivia, Brazil, Peru, Uruguay and Venezuela, where semi-official policy holds either that high birth rates are desirable, or that if they constitute a problem, it will be settled in time by economic and social advancement.

It is interesting to compare these classifications according to policy with others based on the evolution of birth and death rates, that is, on the rate of demographic expansion. The Latin American growth rate mounted slightly in the 1960s, leveling off at about 2.9 percent. While the regional birth rate dropped from 40 per thousand in 1960 to 38 per thousand in 1970, the gross death rate declined from 11 to 9 per thousand in the same span.

Four Latin American countries went through a demographic transition similar to that of European countries, in which moderate, declining birth rates are combined with increasingly lower death rates (as an effect of population ageing). Heading the group are Argentina and Uruguay where population growth in 1970 was 1.5 and 1.2 percent, respectively, followed by Chile and Cuba with about 2 percent. It should be observed that the levels of per inhabitant income, education and urban improvement in all four countries are much higher than the regional average.

Five of the largest Latin American countries appear in groups with population growth rates of 3 percent or more. In two—Brazil and Venezuela—there was a slight decline in 1960-1970 from 3 percent to somewhat under 2.9 percent in the first, and from 3.6 percent to 3.3 percent in the second. In another three—Columbia, Mexico and Peru—the birth rate decline was too slight and population growth in 1970 reached 3.5, 3.5 and 3.7 percent, respectively.

Population growth rates in most of the smaller Latin American countries moved up at varying degrees during the decade of the sixties. The exception is Costa Rica, where in the same decade the population rate was lowered from 3.9 to 2.9 percent. From one of the highest birth and population expansion co-efficients in the world, it moved into the group with a rate less than 3 percent. The birth rate dropped considerably: from 48 per thousand in 1960 to 35 per thousand ten years later.

According to an ECLA study, although Costa Rica began to give strong support to family-planning activities in the mid-sixties, the birth rate began to decrease well before these activities could produce an appreciable effect. The phenomenon appears to derive directly from family decisions determined by a spontaneous change of values regarding number of children. The trend serves to back two important hypotheses: a) the lowering of birth rates in Latin America could proceed at a much faster pace than in the past, provided certain propitious conditions are first secured; and b) levels of consumption, education and other aspects of modern life are much more important requirements for the achievement of this transition than state policies and programs.

Family planning, though a factor of prime importance, is not enough; what is needed is a population policy shaped in the light of overall national economic and social objectives. The existence of a global development plan is an essential prerequisite for such population policy. It was recently affirmed that a true population policy will be possible only when development planning ceases to be a matter of econometric refinements divorced from specific conditions and the urgent needs of a given country. It is vital to join economic and demographic targets in a congruent whole so that they may reinforce each other. A population policy must take into consideration such variables as economic development goals (rates of economic growth, industrial development, employment, food production, regional imbalance); social development goals (education, social and cultural services, health), and environmental concerns (rates of nonrenewable resource exploitation and environmental pollution).

The demographic growth rate should correspond to the basic objectives defined in the global economic and social development plan and be compatible with them. Viewed in these terms, the population policy, which encompasses family planning, would be a vital and useful means to achieve the country's development targets.

[Excerpted from "Family Planning in Latin America," Comercio Exterior de Mexico. Mexico, D. F.: Banco Nacional de Comercio Exterior, S. A., Vol. XIX, No. 7, July 1973, pp. 3-4.]

SMALL FARMER CREDIT

RURAL BANK IN TAIWAN
PROVIDES CREDIT TO SMALL FARMERS.
[PHOTO: AGENCY FOR
INTERNATIONAL DEVELOPMENT]

Conditions for Success in Small Farmer Credit Programs

Millard Long

[Small farmer credit programs have very often failed to increase production and are frequently so high in cost that they need heavy subsidies to stay in operation. There are some successes; but the requirements for success, and an estimate of the costs and benefits in alternative policies, should be carefully considered by governments contemplating such programs.]

In idealized form, the scenaria for a public sector program of credit for small farmers goes as follows: the government or central bank loans money to an agricultural bank which in turn relends the funds either directly or through cooperatives to small farmers. The farmers use the funds to purchase productive inputs—fertilizer, seeds, pesticides, etc., which are combined with family labor to produce more output. The additional output is sold and the proceeds are sufficient to repay the loan and leave the farmer better off. The payments received from the farmers and the agricultural bank are sufficient to regenerate lending capacity, to cover administrative costs and to pay the interest on the government loan. Such a program consumes no resources; the money committed simply constitutes a revolving fund. The loans are repaid and the interest charges are sufficient to cover costs and any defaults. Yet experience belies the model. There may be no increases in agricultural production following the credit program. And, because of high default rates, the funds pledged by governments to agricultural credit do not regenerate themselves; nor does the interest received cover costs. Somewhere between model and reality something often goes wrong.

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AID SPRING REVIEW

These three articles on small farmer credit programs originated in a program of research and conferences sponsored by the U. S. Agency for International Development (AID), termed the Spring Review. Some 60 papers were written on credit programs in developing countries; over 20 analytical papers were composed on the basis of these country papers; and a series of six regional and four national "Workshop" meetings were then held in Latin America, Asia and Africa, culuminating in a July 1973 conference in Washington. At all stages, university professors participated along with practioners of many nationalities. Twenty volumes of Spring Review papers have been printed by AID, and a summary book is now in process. Further articles based on the Spring Review are planned for the Development Digest.

Credit as a Constraint on Production

Formerly it was believed that a shortage of capital was a constraint on the productivity of small farmers. Today most of the work on agricultural development supports the view propounded by T. W. Schultz that in traditional agriculture capital is not a significant constraint on the output of small farmers. Over time, farmers in traditional settings have acquired the amount of capital that is consistent with their technology and their holdings of land and labor. Thus in the absence of new techniques the proceeds of public loans will be used primarily to finance non-productive expenditures. Technical change should not be confused with economic opportunity, however. New techniques must be sufficiently profitable to overcome the small farmers' innate conservatism toward risky new ventures, and profitability depends upon the availability of inputs and access to markets for sale of the output. A credit financed expansion in the demand for inputs not matched by additional supplies will only produce a rise in prices, not an expansion in output. Correspondingly, any fall in the price of the product in response to additional output will lower the profitability of innovation to the farmer.

A number of reports on the experience of credit programs conclude that the availability of credit has not been a constraint on output. On this point the evidence is convincing: for a credit program to lead to greater output, there must be a desire on the part of farmers to invest more capital. Such a desire arises in a group of small farmers from the realization that there are profitable investments which they cannot undertake with their present holdings of capital. Such opportunities for investment usually arise out of a change in agricultural technology. Some new technologies require no additional capital— e. g. where a new variety of seed costs little more than the old—but the total package of inputs needed to take

full advantage of most new agriculture technologies will require at least additional working capital, if not more permanent investment.

In most developing countries private credit is a far more important source of funds than public credit. In only a few countries does public credit exceed 20 percent of outstanding agricultural loans. In addition, household savings, even among small farmers, is probably the most important source of financing for new investment. Thus many small farmers have been able to take advantage of new practices without access to institutional credit. Adoption of new technologies by farmers of different size and different sources of financing has been most extensively studied in India and Pakistan. In both countries a number of small farmers without access to institutional credit have adopted the new wheat technologies, though perhaps at a slightly less rapid pace than larger farmers, and overall participation rates are less than among the large farmers. Researchers working on Latin America, however, report cases where access to credit does affect agricultural practices. Rask's study of a sample of farms in Southern Brazil shows the larger farms used more credit and more modern inputs. Colyer and Jiminez examined use of credit in Colombia by matching a sample of farmers in and outside an institutional credit program; those involved in the program used more fertilizer, pesticides, etc. than those who were not. In sum, if small farmers have access to public credit it will almost certainly speed their acceptance of new, more capital intensive production techniques. Without credit some farmers will not adopt the more costly procedures; others will adopt the new techniques but only more slowly.

Institutional Lending

Few of the existing public credit institutions lend very much of their funds to small farmers. Large farmers are usually the primary beneficiaries of public credit programs. In Pakistan, the smaller 60 percent of farmers got 3 percent of the institutional credit; in Bangladesh few farmers hold more than 3 acres, yet these larger farmers corralled more than 80 percent of the loans from the Agricultural Development Bank. Studies from Tunisia, Bolivia, Brazil, Colombia, Ethiopia, Honduras, Morocco and the Philippines all show the larger farmers as the main beneficiaries of institutional credit.

Public credit institutions are under various pressures which cause them to lend primarily to larger farmers. Among these pressures are those to keep administrative costs down, to avoid default, and to use credit to increase production. It is certainly true that administrative costs rise as a percentage of loan value, especially if they include loan supervision, as the average size of

loan falls. In addition, there is widespread belief among credit agencies that the larger farmers are less likely to default and are more likely to adopt new technology. Furthermore, given the widely prevalant upper limits on interest rates, credit agencies cannot cover the costs of their loans to smaller farmers. In addition, sometimes only larger farmers can provide the land titles that may be required as collateral. And larger farmers, because they are much better connected with loan officers, can exert the political pressure needed to corral available public funds.

The interest charged on public sector credit is usually well below the rates charged by commercial lenders in the private informal sector, about the same as private banks constrained by usury laws, though above the rates charged by friends and relatives in most societies. The Spring Review country papers indicate that in some public programs farmers must bribe officials to get loans; in these cases the subsidy on credit goes to the officials, not the borrowers. And aside from interest rates, other terms offered by public sector agencies tend to be less attractive to small farmers than those offered by the private sector lenders. Charles Nesbit in a survey of attitudes among farmers in Colombia found that despite the higher interest rates more farmers preferred to borrow from the money lenders than the banks. Their complaints were that institutional programs involved too much red tape, were too slow in providing the money, too rigid as regards repayment timing, etc. In a detailed study of the "true" cost to the farmer of official credit in Bangladesh, Mirza Shahjahan concluded that a combination of application fees, travel and entertainment costs, and loss of working days in getting loans made public credit as expensive as private borrowing.

Small Farmer Borrowing

Even when there is an opportunity to invest, some of the funds borrowed from institutions will be used by small farmers for non-productive purposes, which is usually considered an unwarranted diversion of funds. Yet it is by increasing consumption that the farmer's welfare is improved, which is the ultimate objective of any credit program. Like others, farmers wish to consume today in a response to an expected rise in income. Supervision and voucher systems instead of cash payments can reduce the use of borrowed funds for consumption. But even with supervision, farmers still have considerable flexibility in the use of money. Only the opportunity to use additional capital profitability will substantially lessen, but cannot eliminate, the tendency to use borrowed funds for con consumption.

The decision to repay loans is both a moral and an economic decision. Many of the Spring Review country reports state that farmers

do not consider the repayment of public loans a compelling moral obligation. In such a situation, the rate of repayment will be low unless there are significant economic sanctions against default. However, in many developing countries stated sanctions against default by small farmers are not enforced. Frequently the only real sanction is that a farmer cannot get new loans unless he repays outstanding credits. But the size of loan to an individual farmer cannot be increased indefinitely, and once the amount has leveled off the farmer has less incentive to repay because he only gets back next period what he returns today. This helps explain why repayment percentages often fall as credit programs mature. It is thought that farmers who are not "required" to repay their loans are more likely to use the borrowed funds for consumption rather than production. In any case, it is unjust that those who do repay should subsidize those who do not.

Costs and Benefits

All of the above has dealt with the conditions required for an agricultural credit program for small farmers to increase the value of agricultural production. Yet even such an increase is not sufficient to call a credit program a success. Credit programs are costly, and in a successful program the value of the benefits must exceed the costs. Among the costs are administrative costs, supervisory costs, alternative opportunity costs on the funds invested, default, and other social costs. The benefits include the increases in production attributable to the program, income from loan interest, and other social benefits.

To say a few words about the various categories in benefit/cost accounting: default is a cost to the credit institution, but to society it is a transfer payment in the sense that default does not consume resources. Thus it is treated as a "financial" cost but not a "social" cost. However, the benefits of that transfer are not decided by government and are often most inequitably distributed. To the lender default is a cost, and there is a trade-off for the institution between administrative costs and default: the more carefully the institution scrutinizes the applicants, supervises the use of loans, and pursues delinquents, the lower the default rate but the higher the administrative costs. Administrative and supervisory costs are both financial and social costs. On the benefit side, the income from interest on loans is a financial benefit to the lending agency but not a social benefit as it does not add to the society's resources. Increases in farm production are social benefits, and also financial benefits to the farmers but not to the credit agency.

Some public credit institutions operate on borrowed funds, on which they are required to pay interest; others do not. In either

case, there is a real opportunity cost of using the funds for such credit rather than in some other program. This opportunity cost is not adequately measured by the low interest rates most governments charge the credit institutions. There is a substantial literature with various estimates of the opportunity costs of capital in developing countries; suffice it to say that those estimates are almost always in excess of 10 percent in real, not inflationary, terms. This greatly exceeds the 3 to 4 percent which the credit institutions usually pay their governments for funds. The interest paid to governments is a financial but not a social cost; the opportunity cost is a social but not a financial cost. In analyzing economic projects, both financial and social accounting of the benefits and costs are necessary; it is the balance on the social accounts which should be the ultimate guide to government policy.

The costs of administration are reported on various bases—sometimes including, sometimes excluding supervisory costs and capital costs. In the figures below, capital costs have been eliminated, but the amount of supervisory costs included is not determinable. For the programs reporting administrative costs, the figures as a percentage of new loans issued cover a wide range from 5 percent in the Philippines to over 150 percent in Nigeria. Default rates are equally difficult to compare because some agencies refinance overdue loans while others do not, and among agencies practices differ greatly between calling a loan overdue or defaulted. For the same sample of countries defaults fell between 2 percent in the Philippines and 64 percent in Nigeria. Judging from the limited data available, administrative costs may average around 10 percent, default around 30 percent. The foregone earnings on the invested capital are of the order of 10 percent. Thus, the costs of these agricultural credit programs range from a low of about 15 percent to a high of well over 100 percent of new loans made, with an average of perhaps 50 percent. Existing programs include farmers of all sizes; special programs for small farmers would be expected to show costs at least as high as the average figure. Since the interest on loans does not exceed 12 percent in most programs, there is usually a deficit in financial terms for the lending agencies.

Because existing information on the production results of credit programs is inadequate, it is not possible to estimate whether the social benefits of these programs for small farmers justify their high costs. The costs to the society of a supervised credit program for small farmers (default excluded) would be of the order of 20 percent per year. One may guess that many existing credit programs do not yield a return of that magnitude. But in those situations were the conditions of success listed above are met, the value of increased production could greatly exceed those costs; production increases resulting from imitative innovations by

farmers outside the program should be included along with the production gains of those in the program. Where the conditions of success for a credit program for small farmers are not met, other programs— subsidies to the inputs, price supports for the output, more extension work, or even credits to the marketing system rather than the small farmer—may be more capable of raising the welfare of small farmers at lower cost without a credit program, and could be regarded as alternatives to credit. It is also possible to combine such programs with small farmer credit, of course. The costs of each possible policy package should be added up and carefully compared with the expected benefits.

There often are unmeasured social costs associated with public credit programs—undesirable results of a program which are not reflected in the accounts of either the lending agency or the government nor in the production accounts. In developed countries modern agriculture has been marked by a continual deepening of capital on the farm. It is not clear that capital deepening will— or should be— a continual process in countries with large pools of unemployed labor. Pakistan is a case in which cheap credit for mechanization led to an excessive introduction of tractors and a corresponding displacement of farm labor. Alternatively, the cheap government credit may be used to purchase land, exacerbating the land tenure problem, as occurred in Colombia. The success of a credit program depends upon investment, but not every "investment" is socially desirable. However, it should be noted that there are also non-measured social benefits from a program that can partly offset or exceed the kind of social costs mentioned—depending on one's method of evaluation. These would be found, for example, where a program actually brought increases in rural employment, reduced peasant indebtedness to moneylenders, or improved the status and opportunities open to small farmers.

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Technology, Profit, and Agricultural Credit

Ronald Tinnermeier

[Small farmer credit programs will usually fail to raise farm output and income, and can invite defaults, unless the credit is accompanied by new technology which is actually profitable to the farmer in conditions he faces. Adoption of new methods is often hampered by the small farmers' justifiable risk aversion and by inadequate provision of information and inputs.]

Small farmer credit programs are increasingly coming under attack for two reasons: (1) almost all of the programs have relatively high rates of delinquency in the repayment of loans; and (2) there is little evidence that the credit has had any positive impact on small farm productivity or income. The causes for this poor showing are many and complex, and vary from country to country; they include a multitude of organizational, administrative, leadership, political, financial, and other problems. However, overemphasizing those problems, important as they might be, often causes us to lose sight of the very essence of agricultural credit—increasing productivity. This normally requires some kind of technological improvement. The thesis of this paper is that small farmers have not been able to repay loans because they have not had the means of productively using the credit when it is available, due to the frequent absence of technological improvements that are: (1) profitable to the small farmer under the conditions he faces; (2) free of risks that he finds unacceptable; and (3) made available to him with information supplied by extension agents combined with adequate supplies of required inputs.

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Does Profitable Technology Exist?

A given technology implies a given set of inputs or factors of production. Thus, "traditional technology" in farming means the particular way the inputs of land, labor, seed, hand implements, oxen, organic fertilizer, and water have been combined and used in a particular area over a period of time. "New technology" is a new set of inputs or factors of production which are different from a traditional set—that is, at least one factor has been added, dropped, or changed in some way. Innovation, or the adoption of a new technology, does not imply that the new practices are necessarily the result of a recent scientific discovery; as used here, the word "new" means only that the practices in question have not previously been used by the farmers in a given area.

To be profitable, the increase in the value of the output resulting from adoption of a new technology must be more than the increase in the input costs. It has been widely held that large doses of credit are needed to facilitate rapid technological change in agriculture, but this presupposes that such profitable investment alternatives do, in fact, exist for the farmer. What evidence is there to support this assumption?

Traditional technology. It is now widely accepted by agricultural economists that most farm operators in developing countries operate in a rational economic manner, given the conditions they face. This implies that they cannot significantly increase their farm production either by reallocating the resources at their disposal or by adding more of the traditional inputs. While the available data concerning the profitability of expanding the use of traditional technology are confined to a limited number of particular situations, the data which do exist tend to support Schultz's original thesis that it is unprofitable to expand the use of the traditional technology. Perhaps the expansion of land area does hold promise for some parts of Latin America and Africa, but input constraints rapidly set in where traditional inputs are used, especially for labor. Large-scale land settlement is normally very expensive relative to the income generated using traditional technology.

This conclusion, while somewhat tentative, forces us to turn to the introduction of new technology if we expect to bring about a significant increase of incomes in the small farm sector. Therefore, further expansion or support of credit programs is not to be recommended unless new output-increasing technology is available to the potential borrowers.

New technology. To assume without examination that new technology is available for the small farmer, and that it is profitable to

him, is the biggest error the proponents of agricultural credit have made. In most small farmer programs, virtually no technical assistance has been provided with credit. The recent development of the high yielding rice and wheat varieties and their relatively rapid adoption has perhaps lulled us into complacency. Very often, however, new technology has not been locally adapted or tested under conditions similar to those faced by the farmer. Or, if shown to be physically better under local conditions, such technology may still be unprofitable.

On the positive side, recent innovations have been shown to be profitable for farmers in parts of Zambia and Rhodesia. New and profitable technologies were successfully introduced with credit in Mexico, Ethiopia and Colombia. Orlando Sacay concluded that the new rice varieties were profitable in the Philippines during the regular rice growing season, but they produced lower yields than the traditional varieties in the dry season. For a different Philippine province, Kenneth Smith found that "in the lower price ranges which prevail, the new technology is less profitable, per crop, than the lower yielding traditional methodology, for the typical yields cited." Similar experiences can be drawn from many other studies. In other words, new technologies that have been discovered in experimental research may or may not be profitable to the small farmer for a variety of reasons. Unfortunately, very little or no testing of the profitability of recommended practices by lending agencies takes place at the farm level.

It is interesting to note that much of the output-increasing technology which has been introduced to date has been for single crops (rice, wheat, and corn). Nevertheless, one should not assume that new technology only means high yielding varieties and fertilization. Nor should it be assumed that similar dramatic breakthroughs will come in the future. Successful small farmer development programs, including credit programs, may have to rely on more modest technological advancements. These improvements must be profitable to the farmer, and demonstrably so on his own plots. Too often, research is designed to provide new knowledge for the medium- and large-sized units. Also, experiment stations are located on the best land, with good water availability, a far cry from the conditions under which many small farmers operate. The final test of a research recommendation is its economic performance for the farmer on his own land.

Small farmer technologies. New technology is seldom completely neutral in its effect: some groups of farmers receive more benefits than others. Most of the products of modern research are best suited to the conditions on large farms. This may result from unconscious biases in the kinds of research attempted, which may not

coincide with the best interest of countries where small farms predominate. Should new kinds of technologies be developed which are especially designed to assist the small farmer?

A review of small farmer studies does suggest a number of researchable areas appropriate for solving the production problems and constraints peculiar to small farm operations in developing countries. Some possibilities include:

(1) new water management techniques for storing and using water, including the economics of small scale irrigation projects;

(2) water-nutrient interactions for crops presently grown on small farms as well as those with potential, i. e., horticultural crops, fruits and nuts, especially under less than ideal rainfall or irrigated conditions;

(3) new output-increasing techniques for the more traditional crops such as cassava, potatoes and legumes and for livestock activities;

(4) information on the sensitivity of yields to land preparation and timing;

(5) feeding rations utilizing the increased output from the traditional crops;

(6) seeds with high yields but with less variation under different climatic conditions;

(7) new animal powered farm implements;

(8) mechanical tillers and other small power implements, as needed;

(9) low-cost and effective on-farm storage and drying facilities;

(10) new techniques of multiple- and inter-cropping, to increase incomes and reduce risk;

(11) techniques for improving managerial skills.

These research topics specifically relate to the needs of small farmers, and are presently poorly researched. The major international research institutes, as well as some research stations in developing countries, are now beginning to shift a portion of their research funds to activities that could better meet the needs of small farmers. For example, over the past few years, the International

Rice Research Institute has carried out research on the effects of successively planting different crops on the same plot (multiple cropping), as well as planting more than one crop in the same field at the same time (intercropping). Interestingly, it was found that in the tropics total production increased when crops were intercropped. Intercropping also significantly affected weed and insect populations. Far more attention to the production gains that can be attained by multi-crop combinations should provide high research pay-offs for both scientists and small farmers. Further, most developing countries are facing serious unemployment problems in the rural as well as urban areas. Providing research results for small farmers which allow them to increase their farm incomes concurrently with providing more employment can help alleviate this problem. Employment in Africa, for example, would be increased by a greater use of animal power, and by paying more attention to small-scale, rather than large-scale, irrigation projects.

Technology and Delinquency

Although the evidence is inconclusive, there does appear to be a direct relationship between loan repayment and the availability of new and profitable technology. Only a few of the credit projects covered in the Spring Review had loan repayment rates above 90 percent and, in most cases, these projects successfully provided profitable technology to the farmer. One of these was the Puebla project in Mexico which significantly improved corn yields under rainfall conditions, primarily through higher planting rates and by changing the amount and timing of fertilizer application. Incomes for participants doubled or tripled as a result of this program. Other programs in which new technologies resulted in increased farm incomes were the CADU project in Ethiopia, the Comilla program in Bangladesh, the INCORA and ACAR programs in Colombia and Brazil, respectively. Except for a few cases, however, new technology has not accompanied the credit for small farmers in most countries. Furthermore, almost no programs have been identified which have low delinquency rates without providing new, output-increasing technology along with the credit.

Thus, it may be argued that new technology is an essential condition for a successful credit program. One would hasten to note, however, that new technology is not a sufficient condition for success. For some programs the technology was available but price, land tenure, or marketing policies were inadequate to make its continued adoption profitable. The Nicaraguan credit program, for example, significantly increased corn yields, resulting in a 50 percent drop in price at harvest which caused repayment problems.

Risk and Adoption

Even if profitable new technology is provided with credit, this may still not be sufficient for its rapid adoption. If considerably more risk is associated with the new as compared with the old, then small farmers may be unwilling to assume such a risk. Even the most illiterate farmers place probabilities on the outcomes of their farming decisions. Since they cannot accept conditions which might jeopardize their family's survival, their economic decisions attempt to reduce risk and to increase security. The added risks associated with new technologies can significantly affect the extent to which they are adopted.

Yield variability is probably the most serious risk faced by small farmers. The new technologies consistently show greater yield variation than do the traditional methods. Under adverse weather conditions new high yielding grain varieties sometimes yield less than the traditional varieties, while under ideal conditions the yields may be several times more. Suppose a farmer must choose between seed A, with a probable average yield of 100 and a possible range of 80-120, and seed B with an average of 125 and a range of 50-200. For a small farmer to whom yields of 75 would represent the minimum for his family's need the choice would have to be A, while a larger farmer might select B. There is an obvious need to develop plant varieties which show less yield variability, even at the expense of some reduction in average yields. M. M. Malya found that Indian farmers in districts with uncertain rainfall kept a higher percentage of their crop area under drought resistant crops than did farmers in areas with less uncertain rainfall. Crop insurance programs hold some promise for spreading the weather risks faced by farmers and might contribute to the adoption of new practices. But such programs are costly and difficult to administer, and they are not, in practice, available to small farmers in developing countries.

Price variability for his inputs or products is also of concern to the farmer. Product prices typically fluctuate widely from year to year, yet the farmer must predict specific values for each before the crop season. Inputs may be steadier in price, but these too can vary. Governmental price guarantees may help, but these policies are also subject to change— even during a crop year. Price stabilization policies directly affect the probabilities of the profitability of new technology, and are especially needed for those who have a high risk aversion—and that would include almost all the small farmers. The more successful credit programs have been supported by price policies which reduced the input and product price variability to the farmer.

Variable supply of inputs is another problem area for small farmers. A decrease in the total supply of fertilizer, chemicals, implements, and other inputs will be felt first by the small farmer, due to his limited economic and political clout. Thus, he must weigh the risks of delayed inputs of fertilizer, for example, or of shortages that could nullify the gains which should be obtainable from a more costly technology.

The supply of services can also be highly variable. If the profitability of a new technological package depends on receiving technical guidance through the production period, will such help in fact be available? The improper application of fertilizer or chemicals can significantly reduce crop yields. Livestock activities might be especially vulnerable to a delay in technical advice. Marketing services may also be uncertain and reduce profits. For example, can a dairy farmer always rely on the established milk pick-up system?

In sum, it should be obvious that the adoption of new technology and its profitability, both of which directly affect loan repayment, are significantly affected by the associated risks. Small farmers are frequently regarded as ignorant, stupid, or too "traditional" when they reject the innovations proposed to them, but from their own standpoint they may be quite rational in their responses. An important failure in much developmental work related to technological innovations and the extension of credit has been the lack of understanding of the relationship between the expected variances of the old and new techniques with the level of living of the intended clientele.

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Credit Programs to Reach Small Farmers

Carl H. Gotsch

[Successful small farmer credit programs require not only productive investment opportunities but a social environment in which small farmers are an important political constituency. Attempts to organize subsidized credit programs where this latter condition is not met inevitably result in a concentration on the larger farmers. Awareness of the structure of rural society in the design phase of a small farmer program, coupled with extensive monitoring, can help to offset distortions that otherwise tend to discredit such programs.]

Over the years, most developed countries have experimented with credit programs aimed at improving the capital market faced by small farmers. These programs, it has been found, were faced with the same problems now confronting the developing countries. First, it is hard to lend money without keeping an eye on the recipient's asset position. Since, by definition, "small" farmers are those whose situation in this respect is unfavorable, there is constant pressure to invest only in the upper part of any designated target group. The inevitable result over time is that the program leaves the majority of "small" farmers untouched. A second universal finding is that the cost of small farmer credit programs is extremely high per dollar loaned. These costs have two related origins. First, the administrative costs—the paperwork—are as high for a $100 loan as for a $1,000 loan. Indeed, they may be higher if any kind of vigorous check of creditworthiness is run. Second, most programs have shown that providing money without

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ongoing management advice and supervision is a precarious approach. For in addition to a poverty of resources, small farmers tend to lack experience in decision making and to have a limited view of the opportunities open to them.

Analyzing the Potential for Successful Rural Credit Programs

Given that substantial sums have been and are being invested in rural credit, and given the now widely recognized difficulty of involving small farmers in these programs, how does one develop a preliminary analysis of situations in which rural credit programs for small farmers can be successfully organized? It seems to me that the questions one would want to ask can be grouped under three general headings: the technical characteristics of the area's agriculture, the basis of social organization at the village level, and the nature of the national political regime and its attendant bureaucracy. Spelling out in detail the relationship of these variables to each other and to a proposed credit program is well beyond the scope of these comments, but a few general observations might be made.

The technical characteristics of agriculture. As Millard Long has pointed out, the evidence strongly suggests that a necessary condition for a "successful" program is that there be a technology available that will substantially increase net returns. But that is not enough. To show the need for a credit program, it is also necessary that the technology require an increment of capital beyond that which is available through small deferments of consumption expenditures or easily obtainable through short-term loans from informal sources. By this reasoning one would not expect, in most cases, to find credit as a constraint to the introduction of a seed-fertilizer package. Where the real difficulties have arisen, at least in Asia, is with respect to loans for the purchase of intermediate mechanical inputs that would require several years to repay. These items: pumps, motors, tubewells, threshers, etc. are often closely linked with the ability of small farmers to increase their productivity and yet they are "lumpy" enough to create serious difficulties in acquisition.

Local social and political institutions. Crucial to an analysis of small farmer credit programs is the definition of "small." Is it more or less synonymous with subsistence agriculture? Is it defined in reference to the characteristics of various types of technology? Or is it a matter of the size of a particular land holding relative to some other reference point in the size distribution? Whether "smallness" is a relative or an absolute measure of the target group, the problem of getting credit to small farmers is very real. The direct distribution of subsidized credit by government agencies inevitably

invites extra-market activities by the socially and politically powerful, activities that are aimed at securing the available funds for themselves. Because of the greater security they have to offer plus the influence they can bring to bear on local managers and employees of the organization, their efforts are more often than not successful. Where credit is disbursed indirectly through organizations that are ostensibly made up of farmer representatives, the record may be even worse.

It is hard to escape the conclusion that where significant disparities of power—based on some combination of wealth and other sources of status—exist at the local level, credit programs that are expressly aimed at the bottom part of the size spectrum are likely to be unsuccessful in reaching the target group. In the Spring Review country studies, and in my own experience, I have found time and time again that money is being spent haphazardly without even the most basic questions being asked concerning the nature of social and political stratification at the local level.

The national regime. The last set of questions one would want to investigate with respect to the potential for implementing a successful small farmer credit program has to do with the political constituencies of the governing party. This is obviously a complex topic, one that cannot be dealt with briefly. However, it is clear that if there are local pressures working against the target group, only a strong commitment by the national regime to the protection of small farmer interests will insure that the credit program is not distorted as it is being implemented. Indeed, without this kind of support and protection there are good arguments for not proceeding with a program at all. For the results in such cases may involve not only the failure to place resources in the hands of the intended recipients, but a worsening of their situation in the rural community. A frequently cited example involves the tractorization of agriculture where access to cheap credit by large land owners has hastened the displacement of part-time labor and tenants from the production process.

Implications for Programs and Policies

An honest effort to come to grips with power and status variables affecting small farmers would produce two benefits. First, it would keep small farmer programs out of situations where the likelihood that they will be successful is small. These will be hard choices, but idealism must be tempered with an objective appraisal of the situation—if only in the interest of not making conditions worse than they already are. Second, where it has been determined that local conditions would make such a program feasible and that the national government has the capability and will to carry it out, a sensitivity

to the pressures that are likely to distort programs will inevitably lead to badly needed monitoring systems. It is evident from the reported country experiences that, for the most part, those in charge of broad-based region-wide programs don't really know to whom and to what effect the funds are being loaned. This is not surprising, since many of the programs have emerged as a result of bureaucrats responding hastily to political demands that something be done in the countryside with little subsequent political interest in the results.

Monitoring in this case is not to be confused with bookkeeping, although a set of accounts that accurately reflect the nature of lending decisions would be helpful. A more important approach would be to design a system that would be sensitive to anticipated program distortions. Spot checking records, evaluating loan usage, inspecting without announcement, etc. are all techniques that could be employed. In far too many cases, large defaults and questionable procedures have come to light long after the possibility of rectifying them has passed. The result is a condemnation of the concept rather than its implementation.

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INTERNATIONAL FIRMS
PRODUCE AND MARKET GOODS AROUND THE GLOBE.
[PHOTO: TOYOTA MOTOR SALES -
U. S. A. , INC.]

Multinational Corporations in World Development

Department of Economic and Social Affairs, United Nations Secretariat

[The growth of multinational corporations as a major world phenomenon in recent years has prompted a comprehensive report on the subject by the United Nations. The excerpts below cover their dimensions and trends, structure and policies, and the nature of their relationships with developing countries.]

In the past quarter of a century the world has witnessed the dramatic development of the multinational corporation into a major phenomenon in international economic relations. Its size and geographical spread, the multiplicity of its activities, its command and generation of resources around the world and the use of such resources to further its own objectives, rival in terms of scope and implications traditional economic exchanges among nations.

The term "multinational corporation" is used here to cover all enterprises which control assets—factories, mines, sales offices and the like—in two or more countries. Effective control may be exercised not only with complete or majority ownership of affiliates by their parent companies but with a sufficient minority share. This broad definition permits maximum use to be made of existing data, which are variously defined and not generally amenable to reclassification to suit a more restricted definition. One implication of the definition is that multinational corporations are responsible for most foreign direct investment. Nevertheless, the most important questions to be asked in connection with multinational corporations are not limited to financial flows. They concern a host of other activities such as the transfer of technology as well as goods, the provision of

managerial services and entrepreneurship and related business practices, including cooperative arrangements, marketing restrictions and transfer pricing. As the operations of multinational corporations have expanded and evolved, the elements not directly related to the provision of capital have become increasingly important. Moreover, these operations can only be understood as components of an international corporate system. Parent companies that own foreign-based enterprises typically control these enterprises' activities and determine the way in which financial, technical and managerial resources are allocated around the world and the resulting mix of the entire package.

Size, Patterns and Trends

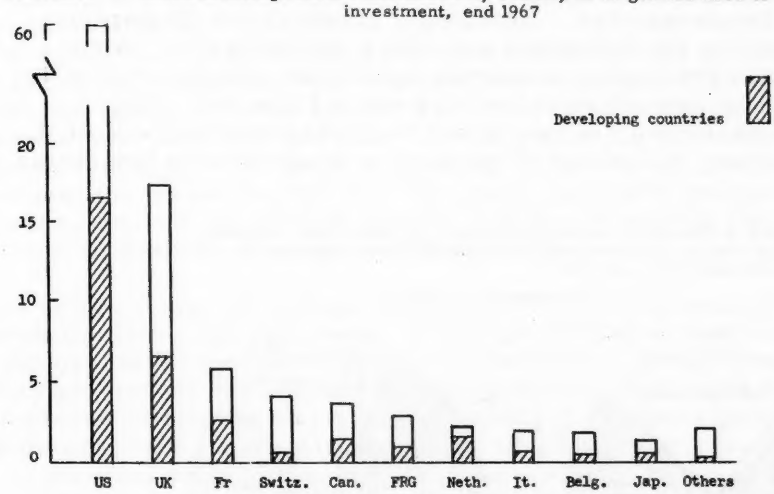
A central characteristic of multinational corporations is the predominance of large-size firms. Both their absolute and relative size has grown dramatically, especially during the last decade. Typically, the amount of annual sales now runs into hundreds of millions of dollars. Each of the largest four multinational corporations has a sales volume in excess of $10 billion, and more than 200 multinational corporations have surpassed the one billion level. Indeed, for most practical purposes, those with less than $100 million in sales can safely be ignored. The very size of the larger corporations as compared with other economic entities, including the economies of many nations, suggests an important source of power. One form of economic power results from their predominantly oligopolistic market positions. Typically, the markets in which they operate are dominated by a few sellers or buyers. Frequently they are also characterized by the importance of new technologies, of special skills, or of product differentiation and heavy advertising, which sustain or reinforce their oligopolistic nature by making entry of competitors more difficult.

The very large multinational corporations have many foreign branches and affiliates. Although almost half of some 7,300 multinational corporations have affiliates in one country only, nearly 200 multinational corporations have affiliates in twenty or more countries. Almost all of the multinational corporations are the product of developed countries. Eight of the 10 largest multinational corporations are based in the United States. All in all, United States firms account for about a third of the total number of foreign affiliates; together with companies based in the United Kingdom, the Federal Republic of Germany and France, they account for over three-quarters of the total. Of a total estimated book value of foreign investment of about $165 billion, most of which is owned by multinational corporations, the United States accounts for more than half, and over four-fifths of the total is owned by the same four countries. Moreover, foreign direct investment of these countries tends to be

concentrated in a relatively small number of firms within each home country. In the case of Japan, however, many small firms appear to have participated in foreign investment along with a few very large ones.

The dramatic growth of multinational corporations in the postwar period has been accompanied by unprecedented growth in the number of affiliates, the levels of capital flow and the stock of investment. Between 1950 and 1966, the number of United States affiliates increased three times, from 7,000 to 23,000. The more recent entry of Japan into the field has been marked by a particularly rapid rate of growth in the number of affiliates. Although no precise data exist, there are indications that the growth of French affiliates was somewhat higher than those of the United Kingdom, while affiliates of the Federal Republic of Germany are growing more rapidly than those of the United States. The growth in numbers of affiliates has been accompanied by an increase in the flow of direct foreign investment and in its accumulated value. During the last decade, the flow of direct investment from 13 countries of the Organization for Economic Cooperation and Development rose from \$2.9 billion to \$7.9 billion a year. Among the countries with an above-average rate of increase were Japan, the Federal Republic of Germany, Italy, the Netherlands and the Scandinavian countries. The stock of investment by country of origin is shown in Figure 1.

Figure 1: Developed market economies (DAC countries): estimated stock of foreign direct investment by country of origin and area of investment, end 1967



Source: Center for Development Planning, Projections and Policies of the Department of Economic and Social Affairs of the United Nations Secretariat, based on table 5 and Organization for Economic Cooperation and Development, Stock of Private Direct Investments by DAC Countries in Developing Countries, end 1967 (Paris, 1972).

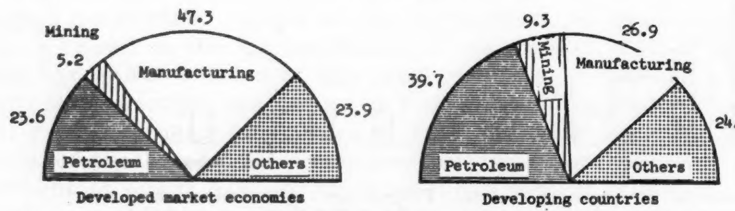
While the network of multinational corporations is world-wide, the bulk of their activities is located in the development market economies. Over two-thirds of the estimated book value of foreign direct investment is located in this area, where the advanced economic level and similarities in institutional and social structures have facilitated the spread of the multinational corporate system. Although the developing countries have received only about a third of this total, the presence of foreign multinational corporations in these countries is generally of much greater significance relative to the size of their economies. Among the developing countries, the western hemisphere has attracted an estimated 18 percent of the total stock of foreign direct investment, Africa 6 percent, and Asia and the Middle East 5 and 3 percent respectively.

Distribution by sector. Historically, the activity of multinational corporations developed in the extractive and public utility areas before it became prominent in manufacturing. When manufacturing activities abroad began to grow, they appeared in the processing of raw materials or in the production of consumer goods. It appears that, initially, manufacturing operations increased faster in developed countries; later in developing countries; but in the last ten years their growth has again been more dynamic in developed countries, especially in western Europe. Industrial sectors involving high technical skills have witnessed the fastest growth.

Manufacturing is at present the major activity of multinational corporations. It represents a little more than 40 percent of the total estimated stock of foreign direct investment of the main developed market economies. Petroleum accounts for 29 percent, mining and smelting for 7 percent and other industries for 24 percent. Whereas in developing countries half of the estimated stock of investment is in extractive industries and a little more than a quarter in manufacturing, in developed market economies half of it is in manufacturing, and about 30 percent is in extractive industries

Figure 2: Developed market economies (DAC countries): estimated distribution of estimated stock of foreign direct investment by sector and area, end 1966

(Percentage distribution)



Source: Center for Development Planning, Projections and Policies of the Department of Economic and Social Affairs of the United Nations Secretariat, based on Organization for Economic Cooperation and Development, as tabulated in Sidney E. Rolfe, The International Corporation (Paris, 1969).

Ownership patterns. By and large, multinational corporations exercise effective control over their foreign affiliates through complete or majority ownership, although at times such control can be exercised from a minority position. At least 80 percent of United States affiliates and 75 percent of United Kingdom affiliates are either wholly-owned or majority-controlled. This desire for majority ownership and control appears to be a general characteristic of multinational corporations from other home countries, except in the case of Japanese multinational corporations, where a somewhat more sizeable proportion of affiliates (and of the investment in them) are minority-owned ventures. This difference in the ownership pattern is apparently influenced by differences in methods of control as well as in the industrial and the geographical distribution of foreign activities. The predominance of trading activities and light industries in the case of Japanese multinational corporations suggests that a relatively small share in their affiliates may be adequate in many cases. Moreover, since a relatively high proportion of Japanese investment— made mostly in recent years— is located in developing countries, the ownership pattern may also have been influenced by a tendency of some Japanese multinational corporations to maintain a relatively low profile in some of those countries.

Dimensions in developing countries. Generally speaking, the relative importance of the multinational corporation in developing countries is rising in the manufacturing and services sectors and declining in the primary industries, in particular those connected with agriculture (plantations). On balance, the over-all importance of the multinational corporation is growing. As a source of the net flow of resources to developing countries, private direct investment flows from such corporations represented about one-fifth of the total in the 1960s. During the decade, this flow increased at an average annual rate of 9 percent. In six out of the 12 developing countries for which data were available, the stock of foreign direct investment increased faster than the gross domestic product. In a few cases, decreases or slow growth resulted from the liquidation of foreign investment through nationalization.

The relative size of foreign investment varies by country and by industrial sector, and the share of foreign affiliates' activity in output, employment or exports varies accordingly. In some countries, the foreign content of the local economy is very high, and at times concentrated in one sector, while in others it is less significant or more diversified. In the Middle East, which accounts for 9.4 percent of the total foreign direct private investment in developing countries, petroleum accounts for approximately 90 percent of the total stock of foreign investment. In South America (36 percent of the total), on the other hand, 39 percent of foreign investment is in manufacturing, 28 percent in petroleum and 10 percent in public

utilities. In Africa (20 percent of the total), 39 percent is in petroleum, 20 percent in mining and smelting and 19 percent in manufacturing. In Asia (15 percent), manufacturing has attracted 30 percent, petroleum 22 percent and agriculture 18 percent of the total foreign investment stock. In Central America (19 percent of the total), manufacturing has attracted 31 percent, petroleum 16 and trade 13 percent of the total.

Only a few developing countries have a stock of direct foreign investment of more than $1 billion: Argentina, Brazil, India, Mexico, Nigeria, Venezuela and five groupings of Caribbean islands. These account for 43 percent of the total stock of investment in developing countries, which is roughly the same proportion as that of their combined gross domestic product to the estimated total for all developing countries. In 12 countries in Africa, the Middle East and Latin America the investment in either petroleum or mining exceeds $200 million. More than $200 million is invested in manufacturing in Argentina, Brazil, India, Mexico and the Philippines. In India and Malaysia, investment in agriculture exceeds $200 million.

There is evidence of an increase in the exports of foreign affiliates, both as a share of total sales and as a share of total industrial exports in Latin America. Thus, exports of United States manufacturing affiliates in Central and South America accounted for 4 percent of their total sales in 1957, 7.5 percent in 1965 and 9.4 percent in 1968. Their share in the total exports of manufactures from these regions, which was 12 percent in 1957, reached 41 percent in 1966. In Argentina, between 1965 and 1968, exports of United States affiliates accounted for 14.5 percent of total exports; in Mexico, such affiliates accounted for 87 percent of exports of manufactures in 1966 and in Brazil they represented 42 percent.

The Nature of Multinational Corporations

Organizational structure. An analysis of the organizational development of 170 United States-based multinational corporations suggests that they have adopted their formal structures of organization in several fairly discrete stages. From an initial period of uncontrolled experimentation which gave considerable autonomy to the subsidiaries, and the subsequent establishment of international divisions which curtailed this autonomy to some extent, many multinational corporations moved eventually to dismember their international divisions and create either world-wide product divisions or area divisions, depending on the firm's strategy of expansion. Other corporations found a mixed structure, with some world-wide product divisions and some area divisions, to be more appropriate for their particular strategy. The "world-wide" product division structure is related to a strategy having a wide diversity in products, while the "area division" is

related more to a strategy based on taking a narrow line of products into more and more foreign countries.

These reorganizations have been accompanied by considerable changes in the attitudes of top management: assumptions that business abroad is fundamentally different from business at home have been replaced by a global perspective and a recognition of the need to integrate closely related domestic and foreign units. Coordination problems still persist, however, in these global structures, especially for those firms with widely diversified product lines and extensive geographical coverage. Many firms are relying increasingly on improved training procedures to maintain coordination. Such training, designed to induce managers and employees to behave in predictable ways consistent with parent company policy, helps to reduce the need for continuous consultation with the center and thus to reduce the costs of coordinating staff groups.

Whereas United States-based multinational corporations have developed carefully designed formal organizations, those of other national origins have tended to rely more on informal procedures. With increasing competition, however, and also increasing scale and complexity, the European-based multinational corporations have increasingly been forced to employ more formalized procedures of organization and control. This is most marked for those with integrated networks of specialized production abroad, because it is there that managerial tasks are most similar: a high degree of central planning and advance scheduling of product flow is essential if the economic gains from reduced costs are to be realized.

Control procedures. In the early years, control of foreign subsidiaries is often minimal or restricted solely to the screening of capital projects. The need for greater centralization, set off by the creation of an international division or by some traumatic event such as a devaluation or the write-off of a capital project, leads to the establishment of a strong central finance and control group. This group introduces procedures for optimizing the cash flows of the entire global system. Decisions about hedging on foreign exchange, borrowing, declaring dividends and so on, are taken centrally. The effect is to subordinate the interests of the subsidiary to those of the corporation as a whole. Consequently, the profits reported for local tax purposes may be understated, and measures of performance may become meaningless unless appropriate adjustments are made to allow for the distortions associated with global optimizing decisions. Sometimes the continued growth of foreign subsidiaries has been accompanied by a loosening of the financial reins, partly because of a realization that the system can be "overmanaged." However, few foreign subsidiaries are allowed to set their own financial policies.

Apart from direct control, the enterprise has developed a corps of trained men attuned to a common set of policy guidelines and standard procedures. Similarly, in other functions, common procedures are enforced. Product choices for the subsidiaries are almost always limited to those products manufactured in the home country, especially in the case of the United States. Marketing procedures, long considered to be the function immune above all others to efficient centralization, are in some firms becoming standardized. Manpower policies regarding key managerial positions are, as a result, being constantly adapted in order to select and train men of different nationalities who can work within this new style of management and at the same time provide an adequate response to governmental pressure for local representation.

Profit and ownership policies. Dividends and royalty payments are not the only means whereby multinational corporations withdraw profits from a foreign subsidiary. Profits can be recorded in other units of a global system, including holding companies located in tax havens, through control of the transfer prices for goods and services supplied by the parent company or exports to other affiliates.

The importance of these controls in influencing the net profit before local taxes depends largely on the proportion of total purchases and sales tied to other affiliates. Import purchases, which are usually tied in, are generally small relative to purchases from local sources. This percentage tends to decline as the local economy develops; but it increases as firms develop networks of specialized, interrelated production. Exports to other affiliates, subject to controls and allocations among all the affiliates, are becoming increasingly important, particularly as the networks are developed. Prices charged for tied imports have been shown in some instances to be far above prevailing world prices, and conversely those for exports have been below world prices. Overpricing, particularly for wholly-owned affiliates, has been used as an alternative to royalty payments. Considerable variation exists, however, in the amount of overpricing or underpricing and its over-all frequency is not known. There is some evidence to suggest that overpricing has been reduced, both by governmental pressures and by problems of internal control.

Another aspect of profit management that generates tension is the recorded profitability of foreign subsidiaries. The apparent high profitability of foreign affiliates of multinational corporations needs to be examined carefully: not only are the profit figures liable to distortion, but the capital base of the affiliate has many discretionary components. The capital structure of a newly established subsidiary generally has a large proportion of locally raised debt if it is a joint venture, but much less if it is wholly-owned. Studies of United States investment in Australia and Japan have shown that

contributions of technology are likely to be capitalized in joint ventures, but not in wholly-owned subsidiaries. This difference may partly explain why wholly-owned subsidiaries have generally reported a higher return on book equity than joint ventures. Further, wholly-owned subsidiaries are provided with special support services at low or zero cost; royalty payments are temporarily forgiven; dividends are postponed. On the other hand, in later years, parent companies expect to be able to move funds between subsidiaries on demand. These qualifications should be kept in mind in analyzing data on the recorded profits of foreign affiliates.

The general trend towards centralization and tighter control leads to increased conflict with governments as they become more insistent upon a greater degree of local participation and influence. Although changes in the relationships between foreign investors and host governments are indicated, the nature of these changes is as yet uncertain. Increasingly, novel forms of ownership arrangement will come into being. Multinational corporations may be allowed unambiguous control for as long as they make a critical contribution that cannot be made by others. As that contribution diminishes, so local control will increase. Various "fade-out" arrangements have already been implemented, and more are appearing in the legislation of developing countries. There are many problems in identifying contributions with sufficient clarity for the purposes of writing a contract, but doubtless these will be overcome as the multinational corporations realize from experience that ownership for a limited time is not necessarily against their interests.

The use of management contracts is also likely to become more frequent. Here the multinational corporation can make a contribution and at the same time earn profits without having the tie of owning physical assets. Such contracts are already widely used by consortia of construction firms in developing countries. Some, particularly marketing contracts, are appearing in the manufacturing sector. Management contracts in production may be closely tied to new forms of royalty agreement.

The Multinational Corporation in International Relations

Given their world-wide spread and significant role in the world economy, multinational corporations are one of the main non-governmental participants in international relations. Yet, despite the fact that their activities cover many countries, that they participate in diverse economic and social systems, and that their interests extend around the globe, there are no "world citizens" by whom multinational corporations can be staffed. The equity of such corporations and the top management of their global operations tends to

be in the hands of citizens of their home countries. At the same time, their corporate interests do not always coincide with those of their home country.

In developing countries multinational corporations can have an impact on international relations by contributing towards placing countries in interdependent or dependent positions from which governments may find it difficult to extricate themselves except at considerable cost. To a large extent this results from the fact that the operations of the multinational corporations are controlled from outside the territory of the host country, and that their policies are based on considerations which transcend those of host as well as home countries. Sometimes the reluctance of governments to pursue policies in respect of multinational corporations that would be desirable from their national point of view may be due to their concern about the repercussions which may result from the reactions of home governments. Such inhibitions may also stem from actions which multinational corporations might take to bring pressure to bear on a government by influencing foreign official or private lending and insurance agencies, customers, and other firms. The political aspect of the host country-multinational corporation relationship is assuming greater importance as multinational corporations continue to expand, as national independence in many countries has lent immediacy to the issue of sovereignty over natural resources and key industries, and as episodes of disguised or overt political interference have come to light.

Another source of tension lies in the introduction by multinational corporations of foreign cultural values and the dilution of the host country's heritage. For instance, the introduction of machine-made goods may contribute to net output but only at the expense of displacing handicraft products. Although this is a common phenomenon in the process of modernization, caused also by domestic enterprises, the ousting of local products by the output of multinational corporations and the displacement of indigenuous enterpreneurs by foreigners are highly visible and much resented. On the other hand, when a multinational corporation operates in a more or less self-contained fashion, especially in oil production or mining in remote places, without any significant change in the old order—as though an oasis had been created in a desert—the question arises as to whether much benefit can be derived from the "enclave." There may also be "industrial enclaves," when the structure of industries in the host country has become so lopsided as to hinder sustained development. This is most glaring in cases where activity is highly concentrated in sectors, such as luxury articles catering for the few, which have limited prospects of interaction with the rest of the economy.

It has long been recognized, however, that private direct investment through the multinational corporation is unique in providing from a single source a package of critical industrial inputs: capital, technology, managerial skills and other services required for production and distribution. The scale requirements of present research and development activity, the decrease of technological and commercial risks in the development of new products and processes through multi-product and/or multinational operations, as well as the specific organizational requirements for the application of science and technology to economic needs, give a particular comparative advantage to the multinational corporation. Quite often this advantage has rested on its ability to combine for commercial use different developments in science and technology for which the basic research was undertaken elsewhere. When production of high technology products is desired, this may be the only way of initiating it.

In many developing host countries, the suspicion is often expressed that the multinational corporation serves as an alient agent to extend "imperalistic" domination and to perpetuate politico-economic dependencia. Even in developed host countries, foreign control of key sectors by multinational corporations is regarded in many quarters as a serious infringement upon political independence, and even sovereignty itself. In spite of such strong reservations, however, the majority of governments of host countries have, on the whole, encouraged foreign direct investment. Indeed, through their offers of generous incentives, governments at times appear to be bidding against each other in efforts to attract multinational corporations. In encouraging the entry of multinational corporations, host governments seem to look upon their contribution as positive, although at the same time they tacitly attempt to obtain an acceptable trade-off between political, economic and socio-cultural costs and benefits.

In home countries, an old debate has recently been rekindled concerning the economic and political implications of investing abroad. The traditional view of its beneficial effects on employment and balance of payments have been disputed by various groups, particularly by organized labor. Governments of the home countries have also found, at times, that multinational corporation activities tend to circumvent or even disrupt their trade, fiscal or monetary policies. Political ramifications in home countries arising out of the operations of multinational corporations have also come under increasing scrutiny, as they can lead to conflict with other governments. Such tensions between governments arise from political confrontations in support of multinational corporations, and also from jurisdictional questions such as the problems of extraterritoriality, of tax loop-holes or of overlapping taxation.

In host and home countries the taxation of corporate income varies significantly from one country to another. Differences among countries are found not only in the tax rates—which usually range between 35 and 50 percent of profits—but also in the definitions of taxable income, in the principles that govern taxing jurisdiction and in practices in making allowances for foreign taxation. In the face of these differences, the problem of the allocation of a multinational corporation's world-wide income among the taxing jurisdictions of the countries in which it operates assumes particular importance. The allocation affects, on the one hand, the tax revenue of the corporation's home country and the various countries in which the subsidiaries are located, and on the other the corporation's over-all tax bill.

One of the most troublesome aspects of the allocation problem in the case of multinational corporations is that of "transfer pricing." The sale by a parent company to its foreign subsidiary, or by one subsidiary to another, of intermediate goods used as inputs by the purchaser is affected at an internal so-called "transfer price." Often there is no market price for the goods in question from which a "normal" cost for these goods could be estimated. The setting of transfer prices at unreasonable levels can not only serve to minimize a corporation's over-all tax bill, but can also be used to circumvent exchange restrictions, minimize customs duties, satisfy local partners of foreign subsidiaries and for a variety of other purposes.

The problems that surround the taxation of multinational corporation activities are further exacerbated by differences in the taxation principles followed by various countries. While every country claims the right to tax income arising within its borders ("territorial" principle), some also claim the right to tax income arising outside their borders when that income is received by a corporation incorporated, domiciled or with its center of control within the country ("world-wide" taxing principle). In these circumstances, a claim to tax income arising abroad implies double taxation. It also implies that competition among firms within a given host country will take place under different tax rates if the home countries of these firms follow different taxation principles. In fact, however, those countries which tax income arising beyond their borders grant tax credit on account of foreign taxes paid on income from foreign sources, usually up to the level of the domestic tax rate.

The international economy. At the international level, the operations of multinational corporations have an important bearing on the functioning of the entire international monetary and trade system, both in the short and the long run. The recent currency crises have focused attention on "hot money" movements. Although such movements have been more a symptom of fundamental defects in the

system than a basic cause, any reform of the monetary system will have to consider possible scrutiny of short-term capital movements as well as compensatory arrangements. The implications of the multinational corporations for the international trade regime are equally wide. In the general framework of decisions on the location of world-wide activities, capital flows may be partially substitutable for trade flows. Furthermore, the predominance of intra-corporation transactions in trade may render adjustment mechanisms less sensitive, and limit free market operations.

Towards a Program of Action

The positive contributions of multinational corporations to the many facets of development have been readily recognized. At the same time the problems raised have become increasingly visible. The generally favorable reception given to multinational corporations in the host countries in the immediate post-war years, as vehicles for scarce capital, modern technological know-how and skills and as a link to the world market, has increasingly been tempered by skepticism and concern. Even in some home countries, questions of possible conflicts in interest between multinational corporations and various social groups have been raised. In the search for solutions to these difficult problems, a strategy for action should be developed which would concentrate on the setting up of an appropriate machinery whereby many key issues can be dealt with flexibly and simultaneously. [Note: the proposals listed below include only some of those intended for international organizations.]

No matter how wisely the host and home countries deal with the multinational corporations, and how socially responsive the behavior of these corporations may be, tensions and conflicts will inevitably arise. International machinery and procedures must be devised for dealing with them.

a) As a minimum, there should be a proper international forum in which views can be aired and problems discussed. The U. N. Economic and Social Council, aided by a committee under it, could assume the main function, drawing on the findings of other more specialized bodies on particular aspects. The objective of the forum would not be to adjudicate but to gather and publicize facts and, through public opinion, serve as a deterrent to abuses.

b) International efforts can also be launched for the harmonization of national policies. A particularly urgent area is that of the taxation of profits of affiliates, which is also related to tax evasion and double taxation. Another urgent area is the harmonization of incentive measures for foreign investment. Although country variations cannot be eliminated, some definition of the rules of the game and of procedures for negotiation is possible. A further area for

harmonization is anti-monopoly legislation. Current efforts by regional organizations should serve as a forerunner of broader international efforts. Lastly, the harmonization of environmental regulations would guard against the abuse of such regulations as an instrument for restricting trade.

c) The various rules of conduct can, in due course, be gathered together and codified. This is implicit in proposals such as that for the establishment of a kind of GATT for international investment. Less ambitiously, a broad international code of conduct in respect of multinational corporations could be negotiated. Although such a code is unlikely to be enforceable without the GATT type of organization, the discussions leading to it could serve as an educational process. Such a code could also serve as a guide to the review and appraisal of the activities of host and home countries as well as of the multinational corporations. On a more limited but still international scale, multinational corporations could be registered with an international organization under the auspices of the United Nations. A set of qualifying criteria, such as "multinationality" of ownership and management, and certain duties and obligations, such as minimum disclosures and periodic reports, could be specified.

d) So long as international authority is lacking, there can be virtually no appropriate machinery for the settlement of disputes. More use, therefore, may be made of voluntary conciliation or arbitration procedures. While a number of governments may be unwilling to submit themselves to arbitration, some may find it convenient. Pre-arrangements may therefore be made for resort to such procedures.

[Excerpted from Multinational Corporations in World Development. New York: Department of Economic and Social Affairs, United Nations, 1973, pp. 1, 5-13, 18-21, 31-38, 42-45, 47-49, 66-68, 73-75, 99-103.]

Forced Divestment and the Andean Group

John T. Lindquist

[A 1971 decision by the Andean Group to require foreign investors to reduce their ownership in enterprises in these countries to minority shares over 15 years has stirred much controversy. Interviews with a sample of U. S. firms having investments in the area indicate that this decision is likely to cause them to curtail future investments.]

In the last few years, the desire on the part of the developing countries for greater local ownership of foreign subsidiaries has been incorporated into "forced divestment" proposals, which are designed to compel a systematic transfer of ownership. Generally, forced divestment proposals require foreign companies with subsidiaries in a less developed country to sell either the majority or totality of ownership to nationals of that country within a stipulated period. The first application of a forced divestment scheme is Decision No. 24, the "Common Treatment on Foreign Capital, Trademarks, Patents, Licensing Agreements, and Royalties," adopted by the Andean Group countries— Bolivia, Chile, Colombia, Ecuador, and Peru. Decision 24, adopted on June 30, 1971, obligates foreign investors with existing holdings who wish to take advantage of the enlarged five-country market as well as all new foreign investors to sell equity over a period of fifteen years to become joint ventures with a minority ownership position (49%). The experience of the Andean countries with Decision 24 provides valuable lessons for other less developed countries considering forced divestment as a formula for reconciling their needs with those of foreign investors.

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The Economic Rationale for Forced Divestment

One of the chief arguments for forced divestment is that the value of a foreign investment for the host country declines over time. After the initial contributions of management, entrepreneurship, technology, and capital are made by the foreign enterprise, foreign investment becomes less essential as the capacity of the local economy increases. The original technology becomes commonspread and knowledge diffused. In time the foreign investment may become a retarding influence, inhibiting the development of local entrepreneurs and local savings.

The argument that the value of a foreign investment declines over time is based on the assumption that the foreign enterprise remains the same over time. However, this is a questionable assumption. As Raymond Vernon, in Sovereignty at Bay, indicates: "Stimulated by opportunity or pushed by local government pressure, enterprises in such industries have commonly responded by continually upgrading their technological and managerial contributions." In many cases, foreign corporations that originally established subsidiaries to replace imports have moved to exporting from their subsidiaries. Empirical study of the actual behavior of multinational corporations gives little justification for the assumption that "the benefits to the host country have declined in time: the contrary could just as well be true."

Perhaps the most compelling economic argument in the minds of those who advocate forced divestment is that the existence of a local partner affects the style in which a subsidiary is used, with results that benefit the local economy. The argument maintains that a local partner would not allow decisions to be made which were at variance with its own interests, and hence indirectly with the national interest. Furthermore, nationals are believed to be more responsive to governmental economic policies and controls.

Less than a handful of studies provide data to support this position. Based upon an empirical study of the behavior of multinational firms in the pharmaceutical, chemical, rubber, electronics, and textile industries in Colombia, Constantine Vaitsos in Transfer of Resources and Preservation of Monopoly Rents maintains that significant monopoly and oligopoly elements are created in input and factor markets by multinational firms due to the fact that resource transfers take place in "package form." In the absence of a local partner, who is interested in maximizing profits in the subsidiary, the foreign firm uses transfer prices, royalties, technical fees, etc., to reduce the reported profitability of the subsidiary so that accusations of exploitation are less likely. Although Vaitsos' data are not

generally disputed, there is some disagreement as to their general significance. Raymond Vernon, for example, does not feel that the Colombian data can be generalized. Louis Wells, who has done extensive research on joint ventures at the Harvard Business School, feels that the data "comes out slightly on the side" of those who claim that transfer prices for imports by joint ventures are generally lower than to wholly-owned subsidiaries. However, he points out that charges for the provision of know-how and trade names, profit remittances, royalties, technical service fees, etc., "appear to be higher for joint ventures than for wholly-owned subsidiaries."

Moreover, the evidence indicates that multinational corporations refrain from exporting from joint ventures. This fact can have serious consequences given the magnitude and importance of the exports of multinational corporations in less developed countries. For example, in 1968, 40 percent of Latin America's exports of manufactured goods were from U.S. controlled subsidiaries; two-thirds of the exports of U.S. subsidiaries were sold to affiliated enterprises, showing the importance of access to the multinational corporation's marketing network. Thus, the adoption of forced divestment could have the effect of aggravating a less developed country's balance-of-payments problems.

From the foregoing examination of the behavior of multinational corporations toward their totally-owned subsidiaries and toward their joint ventures, the available data support the contention that local ownership changes the behavior of foreign subsidiaries. But the corollary assumption that such a change results in benefits to the local economy cannot be as clearly supported. Both Wells and Vernon maintain that the evidence in terms of economic benefits rests on the side of the wholly-owned subsidiary. [Note: Omitted from this excerpt are discussion of the non-economic arguments on divestment, and an account of the heated political controversies surrounding the adoption of Decision 24.]

Response of U.S. Investors to Decision 24

In order to determine the plans of U.S. corporations as a result of the adoption of Decision 24, confidential interviews were conducted during January and February of 1972 with executives of ten U.S. corporations. Carefully selected to represent a variety of firms in terms of type of industry, diversity of product line, and degree of technological innovation, the companies interviewed are all listed in the Fortune 500 and all have substantial investments in the Andean countries. Furthermore, to obtain a more general assessment of the reactions of U.S. corporations to Decision 24, interviews were held with representatives of Business International Corporation, and

the Council of the Americas, and with officials in the U. S. embassies in Bogota, Quito and Lima. From the interviews as well as from an examination of all relevant published material, the conclusion emerges that there will be a drastic reduction of new U. S. investments in manufacturing in the short-run. In general U. S. companies with existing Andean investments intend to continue their present operations serving individual national markets, but do not plan either new investments or "rationalization schemes" among their existing plants to serve the Andean market. In the immediate future none anticipate any new investments, except those planned before the adoption of Decision 24 or those minimal reinvestments needed to maintain present investments.

The major reason that U. S. multinational corporations do not plan to invest in the near future in the Andean countries is that the uncertainties involved are too great. One of the declared purposes of Decision 24 was to provide foreign investors with a more certain environment in which to plan. Decision 24 declares: "The rules of the common treatment. . . must be sufficiently stable for the mutual benefit of the investors and the member countries." However, all the executives interviewed stated that the uncertainties created as a result of Decision 24 are greater than those existing in the Andean countries before its adoption. Frequently cited by U. S. businessmen as reasons why Decision 24 did not reduce the uncertainty of investment in the Andean countries were the following: 1) that because its provisions were ambiguous, its interpretation and administration could vary considerably between countries and within the same country under succeeding governments; 2) that Decision 24 could be modified by the Commission, and individual countries might decide not to apply Decision 24; and 3) that Decision 24 did not provide certainty because the Andean Common Market itself was not viable and would soon break up.

If the uncertainties connected with Decision 24 and the Andean Common Market are overcome, the position of U. S. multinational corporations rests on their assessment of the forced divestment provision. The future response of U. S. multinational corporations to forced divestment will depend upon their organizational strategy in regard to joint ventures. Those companies that have firm policies of 100 percent ownership of their subsidiaries are unlikely to consider divestment for the purpose of serving the Andean market or of making new investments. Corporations that prefer or are amenable to joint ventures may be willing to divest in the future, if their perception of the opportunity presented by the Andean Common Market increases and their assessment of the risks involved decreases.

The major reasons cited by those firms interviewed that require 100 percent ownership of their subsidiaries are the loss of control

over decision-making and over the ability to pursue global strategies and "rationalization schemes" among subsidiaries; the desire to maintain technological secrets and to reap the full benefits from their technolgical innovations; the differences in business practices between U. S. corporations and Latin American business (i. e., over the desired level of dividends vs. reinvestment of earnings); the difficulty of finding suitable partners, etc. Among those companies favoring joint ventures, the main advantages are felt to be the contribution of the local partner in knowledge of the local environment and of marketing methods, more favorable treatment by national governments, and a reduction of the capital investment required.

Characteristics of firms with different policies. Various studies have identified the major characteristics of those multinational corporations which do not tolerate joint ventures in terms of their product line, organizational structure, and strategy. Firms with a narrow product line or an undiversified group of products have been found to react in a similar manner as their product line ages. As the price competition becomes more intense, these firms centralize decision-making in the organization and carry out global rationalization schemes in order to reduce costs. They also use marketing methods to differentiate standard products. As for organizational structure, such firms tend to organize their international divisions geographically (i. e., a Latin America division) in order carefully to control standardized marketing and production strategies. Plants are specialized by product models or parts and a great deal of cross-shipping among affiliates occurs. Each subsidiary is not an autonomous unit, but rather important for its contribution to the total system. Centralized decision-making allocates production and markets in such a way as to maximize the total output of the system. This means that potential conflicts with a local partner are frequent, arising over transfer pricing, market segmentation, quality standards, etc.

Another type of firm that tends to avoid joint ventures is one that concentrates on research and development of new products for familiar markets. Usually these companies have had experience in the international field for several years and do not need the marketing knowledge of local partners Potential conflicts over royalties and technical fees with the local partner are great, and these firms tend to insist on total control of their subsidiaries.

Characteristic of those multinational corporations that tolerate or prefer joint ventures is a broad product line of diversified products. Usually these are firms that continually introduce new products, abandoning old products as they mature and introducing new ones. They do not feel the need to maintain careful control over production and marketing, and find the contributions of a local

partner useful in terms of marketing skills and management. Such firms usually evidence a high level of research and development, but, unlike the similar firms mentioned in the preceding paragraph, they are normally not as experienced in the international field. A decentralized decision-making structure is adopted in which important marketing and production decisions are taken at the local subsidiary level of the corporation. Firms that are small in their fields also evidence preference for joint ventures. If a small firm develops a new product, it tries to exploit its monopoly advantage over the largest area possible. The contributions of local partners in terms of management, marketing skills, and capital are vital, for these firms lack sufficient capital and management resources to exploit adequately its advances with its own resources.

This statis description of firms must be modified to take account of the dynamic aspects of corporations' selections of strategies. It is clear that strategies change over time. A 1971 study by Lawrence Franko indicates that nearly one-third of the joint ventures of U. S. multinational corporations have been converted back into majority or wholly-owned subsidiaries. In explaining the reasons for "joint venture instability," Franko found that "a multinational corporation's toleration for joint ventures appears to vary with identifiable organizational stages of its multinational growth and development." Although many corporations entered joint ventures early in their experience in international operations, as their products mature and price competition becomes more intense, they tend either to diversify their product line or to centralize decision-making and rationalize production and marketing on a global basis. When the latter happens, multinational corporations usually attempt to eliminate their joint venture partners. The study concludes that only those firms which pursue a consistent, long-term policy of product diversification have a high probability of joint venture survival.

This research has important implications for a forced divestment scheme like Decision 24. The divestment provisions of Decision 24 might deter more investors than those which require 100 percent ownership of its subsidiaries. A multinational corporation that might prefer a joint venture where it was free to change its ownership position later, if it adopted a different corporate strategy, would probably refrain from entering a situation where its flexibility was severely limited—as is the situation under Decision 24's forced divestment provisions.

Of the ten companies interviewed, three indicated that they would be willing to adapt to Decision 24's forced divestment provisions in the future if the Andean Group proves to be viable. This finding is in accord with a survey conducted by Guy Meeker concerning the attitudes of U. S. companies toward forced divestment (which he

refers to as "fade-out joint venture"). Meeker found that: "Depending on the conditions involved, 35.6 percent of the companies surveyed indicated that they might find fade-out joint ventures to be an acceptable formula for investment in Latin America." Thus, roughly two-thirds of U.S. corporations are likely to abstain indefinitely from further investment in the Andean Group as a result of its forced divestment requirement.

The Lessons of Decision 24

The most important lesson to be gained from the experience of the Andean countries with forced divestment is that there is a trade-off between the policy objective of greater control over foreign investment and the objective of maintaining existing levels of foreign investment. In the first six months of 1972, approved foreign investment in Colombia totaled only $5 million, as compared to $14.2 million during the same period in 1971.

The forced divestment requirement of Decision 24 strikes at the very heart of the modern multinational corporation. The organization of these private economic institutions is based upon the integration of the production and marketing functions among their worldwide network of subsidiaries in such a way as to maximize the global output of the system. A majority of multinational corporations maintain that 100 percent control of their subsidiaries is essential for their operation. Most less developed countries want the contributions that multinational corporations can provide for their development, yet they resent the loss of control over vital decisions affecting their economies. The forced divestment provisions are intended as solutions to this problem. They are only viable solutions, however, if they are accepted by the multinational corporation and bring about a change in its basic mode of operation. Such a change will take time. At any rate, multinational corporations are not likely seriously to consider altering their behavior unless they perceive it necessary as the result of a fundamental change of attitudes and policies toward foreign investment in the world environment. Until that time, forced divestment is a viable solution only for those countries willing to accept its cost.

[Excerpted from "The Merits of Forced Divestment: The Experience of the Andean Group," Discussion Paper No. 31. Princeton, New Jersey: Research Program in Economic Development, Woodrow Wilson School, Princeton University, October 1972, pp. 1-9, 46-55.]

The Impact of Multinational Enterprises on Labor

Staff of the International
Labor Office (ILO), Geneva

[The ILO has undertaken a wide-ranging examination of the effects of multinational corporations on manpower and labor organizations. These excerpts, focusing on the developing countries, deal with employment and training, wages and working conditions, and trade union reactions.]

While the economic aspects of direct investment by multinational enterprises have received considerable study, relatively little attention has been paid to the way in which these transfers of capital and technology may affect the workers in either the host or the home country. The international business community tends to look upon comparative advantage and free trade as fundamental principles, the application of which will ensure the optimum allocation of the world's resources, including manpower. Manpower thus tends to be regarded as primarily a cost factor reflected in wages and other labor-related expenditures. Such an approach is inadequate, for it does not take into consideration the impact of the multinational corporation's activities on various aspects of the manpower question, such as employment levels, the structure of the labor force, training, management development and conditions of work.

Effects in Host Countries

Employment generation. According to one estimate, U.S.-controlled foreign subsidiaries engaged in manufacturing and extraction employed about 49,000 U.S. nationals and some 5.5 million local workers in 1966. The U.S. Department of Commerce reports that majority-owned foreign affiliates of U.S. manufacturing corporations employed in 1966 slightly over 3 million workers, of whom only

10,594 were U. S. nationals. Some 717,832 of the 3 million, or 23.8 percent, were employed in developing countries, while 76 percent were working in economically advanced countries. Table 1 shows employment in subsidiaries of U. S. multinational manufacturing corporations in 1966, broken down by industry.

TABLE 1. Employment in majority-owned foreign affiliates of United States manufacturing corporations, by industry, 1966

Industry	U. S. employees	Foreign employees	Total employment
Food products	472	238,981	239,453
Paper and allied products	190	92,600	92,790
Chemicals and allied products	1,070	331,113	332,183
Primary and fabricated metals	527	213,407	213,934
Non-electrical machinery	774	379,511	380,285
Electrical machinery	406	388,498	388,904
Transportation equipment	869	459,528	460,397
Other	6,286	897,141	903,427
All industries	10,594	3,000,779	3,011,373

Source: U. S. Department of Commerce: U. S. direct investments abroad, 1966, Part II: Investment position, financial and operating data, Group 2: Preliminary report on foreign affiliates of U. S. manufacturing industries, A supplement to the Survey of Current Business (Washington, D. C., January 1972), p. 61.

A group of 18 foreign manufacturing and banking firms operating in the Campinas area of Brazil attempted to determine the net benefits derived by the country from their activities. The most important impact was that on employment: the 18 subsidiaries and their suppliers employed 40,595 workers, who themselves directly supported another 161,000 Brazilians. The total annual payrolls were calculated to be 13,200 million cruzeiros ($2,178 million); the total purchasing power created was 37,000 million cruzeiros ($6,105 million); total taxes and social charges paid were 11,500 million cruzeiros ($1,898 million). The total savings in foreign exchange during the year under study amounted to U. S. $125.6 million (calculated as the amounts that would have been spent to import products equivalent to the firms' production, plus the firms' total exports less imported components and equipment).

Although it is clear that foreign direct investment does generate employment in the host country, this does not necessarily mean that the employment would not have been generated without the presence of the foreign investment. It is also conceivable that in a host

country with virtually full employment, a foreign subsidiary establishing new production facilities can only employ the local workers it needs by outbidding domestic firms— which might arouse resentment.

Developing countries and technology levels. In the economic progress of developing countries there is probably no other factor as important as the choice of technology for the production of goods. Technology has the greatest impact on employment: on the numbers employed, on the types of jobs offered and skills needed, on the diversification of product lines and consequently on the range of skills developed, and on the current and future structure of the labor force. Owing to its crucial role in the development process, more has probably been written about technology than about any other aspect, and a great deal is being learned about the transfer of technology to developing countries.

Much of the technology introduced into the developing countries by the multinational corporation derives directly from the methods used by the corporation in its home country or by its subsidiaries in industrialized countries. It is usually advanced technology, designed for large-scale production and reflecting the fact that in industrialized countries capital is cheap compared with labor. It may therefore be questioned whether the type of technology introduced into a developing country is always well adapted to the new environment. However, the choice of technology tends also to be dictated by the particular industry concerned and by the product itself, which limit the possibilities of substituting labor for machinery or otherwise making use of the abundant manpower available in the host country.

Not nearly enough is known about the reasons for which multinational corporations choose a particular level of technology when setting up subsidiaries in developing host countries as compared to reasons for the technological choices of equivalent national firms. For example, it was found that subsidiaries of U. S. firms in the Philippines and Mexico did indeed use more capital per worker than their local counterparts, but this was accounted for by the heavier investment they made in buildings and inventories; the firms did not seem to use more equipment per worker than their local counterparts. Similarly, a study of sample firms in Jamaica and Kenya showed that the scope for substituting labor for capital would be small in the short term, and should a local producer take over the production hitherto carried out by a foreign concern, it was assumed that he would choose the same or similar production techniques.

Vocational training. The role of multinational corporations in the training field was the subject of a pilot survey of the training, at all levels of the enterprise, given by such corporations based in members of the Organization for Economic Cooperation and

Development (OECD). [See Development Digest, April 1970, p. 97.] It was found that the number of persons from developing countries trained by these multinationals in the home countries of the corporations substantially exceeded the number of such persons undergoing officially financed training in those countries. Lack of data prevented an accurate assessment of the situation in the developing countries, but there were indications that the part played by the private sector (multinational corporations based in OECD countries) was very important as compared with the training financed in the developing countries by the governments of the OECD countries.

In some countries the training activities of companies, including subsidiaries of multinational corporations, are linked to those of the government. For example, in Colombia industry obtains most of its skilled manpower by cooperating closely with the national vocational training body, the Servicio Nacional de Aprendizaje (SENA). All SENA students are sponsored by firms, and if the trainee is an apprentice the firm undertakes to pay him one-half the minimum wage of the country while he is in training. In many cases large enterprises have their own training centers either in the host or in the home country. For example, at a pilot plant set up in 1961 in Utrecht (Netherlands) by Philips Gloeilampenfabrieken many of the conditions prevailing in Africa are simulated. Both Europeans and workers from developing countries are trained there, mainly in the production of radios, television sets and components. Special efforts are made to solve technical problems on the spot without sophisticated equipment or the advice of specialized technicians. Under the limited conditions of the pilot plant, use is made of simplified production methods, and in seeking to solve problems both staff and trainees have been forced to innovate.

Apart from purely job-oriented training, the plants of a number of multinational corporations arrange for other types of training, normally shorter in duration and often provided in the undertaking during working time. Such training can include: induction training to familiarize new workers with the enterprise, further training to improve the general educational qualifications of existing personnel, the provision of supplementary knowledge and skills to increase a worker's versatility and occupational mobility, and supervisory training, with a view to the rapid replacement of expatriate staff. In many cases it is reported that company personnel engage in a variety of training activities in the host country, such as sitting on examination boards, working in and with vocational training councils and human resources planning bodies, and helping in the elaboration of training standards. At one time it was reported that the General Electric Company in Brazil provided basic literacy and arithmetic courses for employees, with the employee contributing half of the required time, while the company paid for the other half and met all the costs of the courses. In some cases subsidiaries have

established schools or centers open to persons other than their own employees, and have put their personnel and facilities at the disposal of technical schools and universities. By entering into training activities of various kinds in the community, the subsidiary helps to form a pool of manpower qualified to the level required for future use in the firm (as well as other companies).

It is sometimes asserted that because the training programs of multinational corporations are designed to fulfill their own needs they do not necessarily suit the over-all needs of the host country. On the one hand, it is said that subsidiaries of multinational corporations which use capital-intensive equipment are likely to "overtrain" their workers, in the sense that these workers acquire skills and a degree of specialization that are not needed elsewhere in the host country's economy. The question is what these workers would do if a reduction in the subsidiary's work force or a plant closure became necessary. On the other hand, it has been suggested that in some cases multinational corporations train nationals of the host countries only at low levels of skill, which prevents them from entering occupations with better career prospects in the technical or managerial field. Generally speaking, however, it can be said that the subsidiaries of multinational corporations in developing host countries have had a beneficial effect on training.

Management development. In general, the multinational company runs courses for junior and middle level managers in the country where a subsidiary is located, while higher management training takes place in the company's home office or plant. The nature of the management training and development provided by a multinational corporation in its subsidiaries depends upon several factors. The size of the subsidiary may influence the costs and benefits of organizing management training in the host country as compared with those of sending members of the staff for training in the home country. The decision making strategy of the parent company, as reflected in the degree of its centralization, will also have an impact. The more centralized the strategy, the more the emphasis is likely to be on developing managers for subsidiaries to implement rather than to make policy. A third factor is the level of technology employed by the subsidiary. The older multinational corporations, such as Unilever, Nestlé and British-American Tobacco, employ older skills and technologies which can be readily acquired with technically trained national staff. Many of the new multinational corporations, on the other hand, employ more advanced technologies, and in such cases an understanding in depth of the technology involved is important for effective top management. A fourth factor is the availability of local talent. A U. S. corporation establishing itself in Europe would be able to recruit experienced and qualified persons for all grades of management. In a developing country

local personnel with the necessary managerial background and experience may not be available. This would imply a larger initial proportion of expatriate managers and a different training problem.

These considerations, among others, will condition the range and depth of the management training offered to those employed by a multinational corporation in its subsidiaries. Most multinational corporations appear to be aware of the need for continuous training at all levels, and their example has often stimulated management thinking in host countries. The practices of these corporations have frequently been held up as models for other businesses to follow. Their management practices and procedures not only are more elaborate than those prevailing in developing countries, but are often more advanced than those applied in many domestic firms of the industrially developed countries.

Most multinational corporations face the fact that expatriate staff must eventually be replaced by national personnel, either because of legislative requirements in some developing countries, which call for increasing proportions of local staff, or for reasons of cost, inasmuch as it is clearly cheaper to employ national staff than to retain expatriate staff with all the expense of removal, housing, education and repatriation allowances, and other items, all based on salary levels pegged to home country levels. But even when programs for the replacement of expatriate staff are well administered and impartial, there seem to be inherent difficulties in this process. The national may make comparisons between his own formal academic qualifications and those of his expatriate counterpart and, finding himself to be at least equal in this regard, may fail to see that there are differences with regard to experience and other types of qualification. The expatriate executive may be cautious when discussing whether his national counterpart is ready to replace him. In order to meet a prescribed quota of national staff, the subsidiary of a multinational corporation may recruit a national manager for a post for which he is not fully qualified. The new recruit will in fact merely be carrying out routine tasks and will not be in a position to develop his potential fully. At a later date his promiton, or lack of it, will become a source of contention: on the strength of his present position he will theoretically be eligible for the next senior post, but in view of his limited qualifications he is unlikely to get it. Nevertheless, as educational levels of host countries rise, more nationals will move into local management jobs, but few of them can expect to go into top positions at the multinational corporation's headquarters in the home country. As one source puts it:

> For the local national in the host country there are advantages in the multinational company with its prestige, its stability, its wide-ranging activities and

perhaps its liberal personnel policies. But his is also likely to be a permanently subordinate position. Most of the companies had a policy of promoting local personnel to local executive positions, but hardly any appointed local nationals to their main board.

Home Country Employment
Levels and Structure

Although the possible impact of multinational corporations on employment has not been given much attention in most developed countries, serious investigation has begun in the United States, the results of which may well prove to be relevant elsewhere. Some hold the view that the employment problems associated with direct investment abroad can and should be differentiated from those commonly resulting from structural change or the ups and downs of market demand. However, this view is contested by others. The American Federation of Labor and Congress of Industrial Organizations (AFL-CIO) has declared that the rise in U.S. foreign investment and the spread of multinational corporations is an important cause of the deterioration of the United States position in world trade in the 1960s, with adverse impacts on American workers, communities and industries. In a special study commissioned by the AFL-CIO in 1971 the claim was made that some 500,000 job opportunities were lost between 1966 and 1969, owing to the United States' changing trade patterns, including in particular the exports of U.S. subsidiaries abroad to the United States. This figure represented the 700,000 additional jobs which would have been required to produce goods to replace the imports competing with domestic products, less an increase of 200,000 jobs attributable to higher exports from the United States. A majority of workers' organizations in the United States have recently developed an increasingly negative attitude towards movements of capital and technology away from domestic operations to foreign locations by multinational corporations, and have pressed for legislative action to protect the international trade position of the United States.

This position has been strongly objected to by U.S. business, and in 1971 and 1972 several studies were prepared by various business groups to rebut the union position. Essentially the counter-arguments put forward by the various business organizations are two-fold. First, it is maintained that within the context of present-day international trade and competition the U.S. firm has no choice but to go overseas for investment and production. Second, it is argued that the information and data used by the trade unions against the multinational corporation have been incorrectly interpreted and that in fact the multinational firm is a positive element in the U.S. balance

of trade, that it creates jobs rather than reduces them and that its activities help to keep U. S. industry competitive.

The effect of the multinational corporation's activities abroad on employment in the home country is becoming a crucial issue. In the past, when imports into the home country were low or of a non-competing nature, or were balanced with exports, the possible impact of multinational operations on home country employment did not arouse much attention. The commercial activities connected with multinational operations were regarded as normal trade; the commodities involved—minerals, petroleum and plantation products—constituted the raw materials for the home country's manufacturing industries and were therefore acceptable to its workers. Now the manufacturing multinational corporation has come to be regarded by trade unions as one of the primary causes of job loss in the home country, and its expansion abroad is thought to reduce employment there directly in two ways: first, through imports of goods which it is claimed, would otherwise have been manufactured in the home country, and secondly, through the export of goods for foreign markets by the subsidiaries located abroad rather than by plants in the home country. These developments, it is felt, would perhaps not have become disruptive of domestic employment without the simultaneous transfer abroad of capital, management techniques, technology and distributive skills by the multinational corporation. Even then, they might not necessarily have become a subject of dispute if they had occurred at a time of relatively full employment. The fact that Western Europe as a whole has enjoyed a long period of relatively full employment while the United States has had rising unemployment may partly explain why the activities of the multinational corporation and their impact on employment levels have yet to receive anything like the degree of serious attention in Western Europe that they have been subjected to in the United States.

Generally speaking, in the developed countries the burden of unemployment falls most heavily on workers of low skill and educational attainment, while employment opportunities continue to expand at the opposite end of the skill and educational spectrum. This is a continuous process and represents an upgrading of the labor force as higher levels of technology are used and customer preferences change—provided there are adequate opportunities for retraining and re-employment. Manufacturing processes or lines of industry which are innovational, skill-demanding, highly technological and capital-intensive, such as aircraft, electronics and others, tend to remain in countries where they were established and developed, while the low-skill, labor-intensive manufacturing processes or product lines, such as mass-production methods used in the consumer goods industries, are profitably transferred to other locations where costs are lower. This is especially common when a

production process can be physically broken down into its constituent elements and the labor-intensive elements can be carried out elsewhere. When they are not transferred, they are eventually eliminated by automated processes. Low-skilled workers are then reabsorbed into the labor market with the same or a higher level of skill, once they have been retrained. Because of the constantly shifting nature of the labor force structure, developed countries are continually faced with problems of readaptation, retraining and relocation of workers displaced by this process. In recent years, as the pace of technological change has accelerated, these problems have grown in size and complexity.

Wages and Working Conditions

Wages in host countries. In comparisons of the wages in multinational corporations with the wages paid by domestic employers, the usual question is whether multinational corporations pay higher-than-average wages. A common presumption is that they do; but data on this question are limited and difficult to interpret. A study based mainly on manufacturing plants in Latin America, for example, found that with some exceptions U. S. firms tended to pay the legal minimum rates or slightly more but made little effort to apply high-wage, high-productivity policies. However, a survey of firms in Australia found that U. S. -affiliated firms did pay more than others in the same industry, though almost all of them attributed this to local factors rather than to any deliberate policy.

Rather than seeking a pattern applying to multinational corporations generally, it may be more useful to consider particular policies and circumstances that influence wage levels in different companies. A number of companies, for instance, do as a matter of world-wide policy pay wages somewhat above average, though not substantially so. Several firms surveyed in the study of U. S. companies in Australia responded along these lines: "Parent company policy throughout the world is to pay wages at least equal to the going rate in the local community—we don't have to be the leader, but we would certainly never lag behind." To give another example, one of the large multinational companies follows a wage policy based on a thorough survey of local rates: wages and salaries are fixed so as to place the company around the eightieth percentile, and thus to make it one of the leaders but not the top leader.

A basic factor is the current state of the labor market. Higher wages and benefits offered by companies setting up new operations or expanding, or simply trying to recruit and retain labor in a tight market, may come to be regarded by the workers as established rights, and there may be a tendency for the differential to be frozen. An example is the Ford plant at Genk, Belgium, which had to pay

higher wages on opening and to maintain them as it expanded. As the wages in other companies went up, there were trade union demands for increases at Ford based partly on the argument that the Ford differential was traditional, reflected higher profitability and should be preserved. A company's wider interest may also result in the payment of higher wages where circumstances make it especially vulnerable to criticism.

The type of economic activity in which the company is engaged may itself be a decisive factor in determining the pattern of industrial relations and thus its wage policy. For example, in the petroleum and mining industries the necessity for large, fixed investments in particular locations leaves management less flexibility than it has in manufacturing, where it is geographically less bound. In the petroleum industry a combination of vertically integrated technology (which makes work stoppages extremely costly), low labor intensity, rising demand for products, and improvements in efficiency achieved by advanced technology and economies of scale makes it both desirable and possible to pay exceptionally high wages and to provide exceptionally good conditions of work. Mining has some characteristics in common with the petroleum industry, but there is generally a lesser degree of vertical integration, greater labor intensity, more price fluctuation and a greater possibility of stock-piling. The industry comprises many small companies as well as large ones. Work itself is arduous and takes place in difficult conditions. This combination of factors tends to produce hard bargaining punctuated by occasional bitter strikes. An exception is bauxite mining, in which there is a high degree of mechanization and vertical integration: the companies tend to be more like oil companies in their industrial relations policies.

There is no doubt that in the developing countries wages in petroleum and mining, in which productivity is usually much higher than the general level, do tend to be considerably higher than in other branches of activity. A recent study of foreign investment in these industries, based on experience in Latin America and to a lesser extent the Middle East, confirmed that "in virtually every developing country where mineral or petroleum production is an important industry, the average wage in the resource industry is substantially higher than that of any other industrial category." An ILO report on incomes, wages and prices in Zambia noted that the earnings of Zambian miners were double those of wage earners outside the mines and nine times those of peasant farmers. Such disparities between those who have employment in high-paying industries and other workers, coupled with the common disparity between an urban wage-earning minority and a rural majority of small cultivators, accentuates a fundamental dilemma: how to reconcile the principle of allowing workers to share in the productivity of the industry in

which they are employed with the broader social objectives of reducing gross inequalities in incomes and living standards, expanding employment opportunities and generally enabling the entire population to benefit from the development of the productive resources of the country.

Other conditions of work. As in the field of wages, the subsidiaries of multinational corporations have the reputation of offering better standards than those usually found in the host countries: higher standards of safety, shorter hours of work, a five-day week, and better fringe benefits, especially in areas such as sick pay schemes, retirement plans, and allowances for education and transport. In the late 1950s and early 1960s the National Planning Association of the United States conducted a series of case studies of selected subsidiaries of U.S. corporations abroad (in one instance a Canadian corporation) in an attempt to assess their contributions to the host countries. These companies in many instances provided benefits in excess of those required by law or those given by other firms in the area.

With regard to social security legislation, the employees of large companies in developed countries enjoy comparable social security rights irrespective of whether the employer is a local or a foreign company. In addition to the basic protection provided in national legislation, there are often non-statutory benefits which employees enjoy by virtue of collective agreements or arrangements made by the employer for the benefit of his staff (occupational pensions, supplements to basic sick pay, and so on). The employees of a multinational corporation very often enjoy such additional social security coverage through company schemes, although membership may be limited to certain categories of employees. In developing countries, however, the scope of compulsory state schemes (pensions, medical care, family allowances, and so on) is as a rule limited, and the benefits provided by them— if any—tend to be modest. Local companies are less inclined or less able to operate company schemes. Consequently, in developing countries the employees of affiliates of multinational corporations tend to be better off than other workers as far as social security is concerned.

Wage Parity and Harmonization of Working Conditions

The importance of international comparisons of wages and conditions of work is evident in the increasing trade union demand for inter-country wage parity and harmonization of working conditions and fringe benefits. In recent years this issue has become a focus of trade union activities concerning multinational companies. Demands by workers at one subsidiary or at one plant based on

comparisons with conditions at other subsidiaries or plants of the same company have arisen in the past few years in developed countries. So far, trade unions in developing countries have limited most of their efforts in this field to international consultations and exchanges of information.

One established form of international action by the United Automobile Workers (UAW) and certain other trade unions in the United States, notably the United Steel Workers of America, has been the strengthening of counterpart unions in developing countries, especially in Latin America and the Caribbean. The main vehicles for systematic action at the international level have been international trade union federations and their industry departments. Activities aimed at harmonizing conditions have included the regular collection and exchange of information not only on wages, conditions of work and fringe benefits but also on various aspects of corporation finances; the organization of meetings among trade unions representing workers in different subsidiaries of one company and, where possible, the arrangement of discussions between such trade unions and corporate management; the identification of priority areas, and the adoption of common bargaining objectives. Thus the International Federation of Chemical and General Workers' Unions and the International Metalworkers' Federation (IMF) have undertaken extensive research and information activities to facilitate comparisons among subsidiaries, between subsidiaries and the parent corporation and among corporations. The UAW has published a survey of automobile agreements in Latin America, and the IMF has carried out surveys of automobile agreements and of working conditions and plant practices in the agricultural implement industry in North America, Europe and Australasia. At the regional level a meeting of the Caribbean Bauxite, Mine and Metalworkers' Federation in 1971 adopted a number of specific objectives (including a 40-hour week, extended annual vacations and vacation bonuses, premiums for Saturday or Sunday work, paid educational leave and scholarships, various fringe benefits, and equal pay for equal work regardless of nationality, race or sex) as well as the general principle of upward harmonization of wages and benefits in multinational aluminum companies in the Caribbean.

None of this activity implies that harmonization on any truly international scale, especially in respect of wages, is likely to be achieved in the near future or that trade unions regard it as being more than a distant objective. What seems more likely is an intensification of efforts to obtain uniform wage rates and working conditions within countries; the comparative information generated in regard to multinational companies should furnish material for more precisely formulated and better-supported demands.

The question of fair labor standards. There is no agreed international definition of what is meant by fair labor standards. The problem arises in the current controversy in the United States surrounding off-shore operations, that is the assembly, manufacture or processing of goods of U. S. origin outside the United States (notably in Mexico, the Caribbean, Hong Kong, the Republic of Korea and Singapore) by U. S. companies for re-export to the United States. U. S. trade unions have strongly complained that this amounts to "unfair competition" made possible by low wages and fringe benefits, and that it results in the loss of jobs and the depression of standards for workers in the United States.

This argument leads to two basic issues. First, are wages in the host country so significantly below those in the home country that they serve as a primary motive for firms to go abroad; and second, what would constitute fair standards in wages and working conditions? There are indications that, in certain lines of industry, lower labor costs do make enough difference to influence firms in their decision to go abroad. It has often been said that lower productivity in developing host countries tends to even out wage differentials between the industrialized home country and the developing host country. While this may be true in skill-demanding or highly integrated operations, such an assumption can certainly not be generalized. A 1970 study by the U.S. Tariff Commission, for instance, contains the following statement:

> Productivity of workers in foreign establishments assembling or processing products of U. S. origin generally approximates that of workers in the same job classifications in the United States. However, even for those few instances in which foreign labor productivity was significantly less than that of United States workers, the hourly earnings abroad were such that, save for Canada, labor costs per unit of output were substantially lower in the foreign than in the domestic establishment.

It will be recalled that corporations, even when agreeing that labor costs are lower in some foreign operations, argue that they have no other choice than to produce abroad with the same cost advantages as those enjoyed by competing foreign firms. Faced with the alternative of closing production or producing abroad, they prefer to remain in business through foreign operations. They reject the charge that there is anything "unfair" in such a decision, since the workers employed in these operations are granted wages and conditions of work at least equal to those for comparable work in the domestic firms of the host countries concerned. The notion

of fair labor standards raises the conceptual problem of what wage practices could be "fair" to the workers in a multinational company in light of their value productivity, and also consistent with the promotion of employment and social justice for all workers.

[Summarized and adapted from Multinational Enterprises and Social Policy. Geneva: International Labour Office, 1973, pp. 25-26, 28-30, 33-35, 45-49, 51-61, 65, 68-69, 70-78, 81-82.]

U. S. International Firms and R, D & E in Developing Countries

National Academy of Sciences

[A special panel was convened in 1971 by the U. S. National Academy of Sciences to examine the past and potential role of U. S. firms in strengthening the research, development, and engineering capabilities in developing countries, and to identify the principal factors tending to promote or inhibit such a contribution. The panel included ten executives in charge of R and D from U. S. companies in five industries and five academic members. Findings of the panel are summarized.]

The actual role United States firms have played in strengthening research, development, and engineering (R, D & E) in less developed countries (LDCs) has varied greatly, depending on corporate philosophy, the "systems dependence" of the corporation's product or products, and the hospitality of the local environment for R, D & E work, the size of market and the stage of industrial development of the host country. Except for the engineering involved in scaling down production techniques for markets of more limited size and in making modest adjustments to consumer tastes, little R, D & E has actually been carried out in the LDCs. Most corporations consulted are currently skeptical either of the existence of many remunerative opportunities or of the readiness of the environment for undertaking R & D efforts beyond the required engineering (E) phase. Only a few firms (particularly in the pharmaceutical industry and, to a lesser extent, in the food-processing and automotive industries) feel there is room for a considerable increase in current R & D activities in LDCs.

Most of the participating firms list certain preconditions for any significant expansion of R & D efforts by their foreign affiliates. A foundation of mutual respect and understanding between foreign

corporation and host country is an essential base for undertaking pilot projects and developing programs that would be advantageous to both parties. Reasonable stability and predictability in the economic environment—or at least an absence of zigzags in policy that make forward planning futile— are essential if U. S. firms are to make long-term investments and commitments in R, D & E in LDCs. An adequate patent system was also emphasizedas a precondition, especially by the pharmaceutical industry and, to a lesser extent, by the chemical and the electronics-and-electrical-products industries. Almost all companies stress the need for a system of industrial standards, particularly if products manufactured in LDCs are to compete in world markets.

Why Research in LDCs?

The LDCs rely heavily on imported technology, but much of the technology they have received has been ill suited to their needs and conditions. Either product designs or production techniques, or both, have been inappropriate. Even countries such as Brazil and India, though much farther along the road to industrial development than the average LDC, have limited ability to adapt or convert acquired technology. Adaptation to local requirements is also hampered by the cultural biases of U. S. managers and technicians. Attuned to high-volume production systems and to product designs suitable for more affluent societies, they are unfamiliar with and disdainful of any other techniques.

There is a widespread need among LDCs to adapt products and equipment to local laws, physical environments, and customer usages. Such adaptations are not unknown to multinational corporations when they license the manufacture of their products in other industrially advanced economies. In the United Kingdom and Japan, engines and transmissions had to be adapted to a 5-gear system, compared with a 10-gear in the United States, as an accommodation to truck driver habits. In LDC areas where repairmen and even hardware stores are rare, ruggedness of farm equipment (tractors or water pumps), standardization or interchangeability of parts, and ease of part replacements with available tools are particularly advantageous design features. The work habits of the local labor force constitute another set of design parameters to which equipment and manufacturing techniques can be adjusted. For example, workers in India are accustomed to stooping at their work stations. Theoretically, machine-operator control systems could be adapted for these workers— particularly where production volumes warrant the change or a new product design is going to be used.

Most LDCs are located outside the temperate zones. Consequently, agricultural systems, patterns of food consumption, clothing,

housing, and health needs differ markedly from those of the developed countries. These differences are reinforced by patterns of consumer preference determined by different cultural, religious, and economic backgrounds. Because all these factors affect either production processes or products, opportunities to apply R, D & E to develop processes and products suitable for the host countries are many and challenging. LDCs may lack the minerals or other natural resources currently purchased and used by an international corporation in its operations. But they may have an abundance of usable substitute materials not found in other nations where the corporation now does its manufacturing. Also, LDCs may possess some of the materials customarily used by a producer but in a different natural form that could be satisfactorily adapted by appropriate processing. In either situation, R, D & E may find ways to exploit the host country's indigenous resources for use as inputs. R, D & E could also improve extraction and utilization processes with a view to conserving the resources and protecting the environment of the LDCs.

Most international firms, however, appear to have done little to adapt product designs or production techniques to local conditions. They have made little effort to implant indigenous research and engineering capability that is innovative enough to adapt imported technology to local needs and resources. Industrial technologies generally have been held on a close proprietary basis, especially if they have involved advanced technologies with valuable competitive advantages. In the exploration of conventional LDC extractive resources, the large oil and mining companies have been very active. But there may well be unfamiliar plants and non-metallic minerals that would justify a more imaginative effort at search and testing. And the development of LDC markets for products in which consumer tastes differ from those in the Western countries may also merit greater attention and exploration. The reasons for the current levels of attention to local research, and the prospects for possible expansion of such activities, vary widely by industry.

Views from Five Industries

Pharmaceuticals. During the past 15 years, the U. S. drug industry has to a large extent "gone global." In the LDC's, commercial activities have followed a sequential pattern of development from marketing to distribution, and finally to manufacturing. Technical activity is confined mainly to quality control and clinical trials. Performing R, D & E on site in the LDCs ranks low among the priorities of U. S. drug companies. The U. S. companies feel strongly that to be productive, their research efforts should not be scattered among too many R & D facilities. Most companies have small research units in developed countries, principally in Europe; few, if any, have units doing advanced scientific work in LDCs. Research in LDCs may

require financial commitments over a longer pre-payoff period than in developed countries. Modern drug research calls for an array of highly integrated and highly sophisticated operations. To produce fruitful results, most drug companies feel it necessary to have a "Critical mass" in their research groups. Some firms indicate that at least 200 employees per research unit are required for this critical mass— in their research groups. Some firms indicate that at least 200 employees per research unit are required for this critical mass—a total far beyond what production volumes in most LDCs would justify.

To manufacture a drug in an LDC requires chemical processing, pharmaceutical adaptation, and clinical testing. Because of strict standards in manufacturing and cost control, the critical-mass concept, the relatively small size of markets in LDCs, and their gaps in R & D skills, the adaptation of existing product or process technologies has been kept to a minimum. Some exploratory R & D work is carried out, aimed at finding new markets for drugs in LDCs. But, by and large, the patterns of marketing, distribution, and manufacturing developed for markets in industrialized countries are carried over without change to the LDCs, including the careful selection and training of professional "detail men" to familizarize local physicians with the companies' drug products and their applications. However, many firms contribute to the development of technical cadres in LDCs through on-the-job training in activities such as the clinical testing of drugs, and indirectly by grants-in-aid to medicine and related fields in LDCs and research grants to government and university laboratories and institutes.

Portions of the pharmaceutical industry will find it more advantageous in the future to perform some R, D & E work in developing areas. One reason is that public health and control of disease pose special problems in particular countries or groups of countries. A second reason is that in a few of the more advanced LDCs a pool of trained clinicians and other technicians is now capable of high-quality work in certain fields. Third, in many LDCs government restrictions on clinical testing of new drugs are less stringent than in the United States—an advantage that may also carry some risks. Finally, in LDCs that restrict remittances of earnings in a desire to conserve foreign exchange, profits can be plowed back into R & D and the results exported to other corporate entities. Unfortunately, inadequate patent laws and related regulations dealing with the protection of industrial property constitute a major deterrent to the expansion of pharmaceutical R & D facilities in LDCs.

Food processing. In food processing, as in most other industries, R, D & E instituted in an LDC must be result-oriented and profit-motivated. The food industry has special reason for carrying out

R, D & E in an LDC because food products must conform to local consumption habits and cultural patterns. The taste, form, structure, and texture of a food can best be researched in the country for which it is intended. The major factor inhibiting a significant R, D & E commitment in the food-processing field has been the lack of commercial incentive due to small market size. The need to develop local suppliers of indigenous raw materials—again, on a commercial basis—has also been a brake on the expansion of food manufacturing and related R, D & E facilities.

In its heavy dependence on local R, D & E, food technology differs from almost any other industrial technology in an LDC. Where highly specialized technology is needed, U. S. -based facilities can provide backstop services. Alternatively, foreign affiliates of U. S. firms may turn to local government, universities, or private laboratory facilities or research institutes. Cooperative efforts in the development of high-nutrition foods are not uncommon. Illustrative of this type of cooperation are the foreign firms that have assisted local affiliates and research groups in the development of high-protein and other special products. A specific example is "Golden Elbow Macaroni," developed in Brazil by General Foods with AID support as a high-protein food product that low-income consumers in LDCs and the United States would find acceptable and suitably priced.

R, D & E activities of food manufacturers are not limited to food processing or product development. Several companies have engaged in strong development programs in agriculture, such as seed development and production, pesticide and fertilizer use. Their research staffs work directly with growers to improve operations in primary production and to introduce new crop varieties. These efforts have significantly helped to raise overall standards and efficiency in the agricultural sector and to link it to modern industry. U.S. affiliates in LDCs are also major participants in the international association concerned with the development of standards for food products (labeling as well as manufacturing).

<u>Chemicals.</u> Chemical products typically require fairly sophisticated, capital-intensive processing and manufacturing techniques and a fairly high level of engineering and technical skills; they are also subject to very significant economies of scale (high costs at low production volumes). In LDCs, the usual sequence is to develop first marketing and distribution, and to follow with the establishment of local packaging and manufacturing facilities. Concurrent with this last step is the setting up of quality- and production-control laboratories. These laboratories monitor both manufactured product and incoming raw materials. Technical maintenance services are also provided for the manufacturing facilities to assure production within

specifications and minimum down-time of the facilities. "Application laboratories" are normally established to assist in marketing the products. As in most high-technology industries, the chemical companies use technically trained personnel to supply product information to their customers.

Beyond this point, much depends on the nature and magnitude of market growth. Where justified, laboratories are established to adapt processes to local scale requirements and raw material availabilities and to develop or adapt products tailored more closely to local market demands. Such research programs have thus far been minimal. Occasionally, research and development programs are established or supported in local laboratories, usually in the universities. One company noted that it requires about 10 years after establishment before an in-house laboratory can be considered productive and profitable.

Certain trends point to an increase in R, D & E activities in LDCs over the next 10 years. To begin with, a substantial part of planned investments will be outside the United States, and it is expected that in many instances R, D & E activities will follow these investments. Furthermore, rapid inflation in the cost of doing research in the United States will cause more R & D to be carried out elsewhere. A second trend is the increasing willingness of companies to license, sell, and trade or buy technology on a worldwide basis. This trend will continue, since individual companies can no longer afford to develop all the technology needed in their operations. A small- or medium-sized U. S. company can afford research only if it can use the results of its efforts on a worldwide basis. A third significant change of pattern is the new willingness of some chemical companies to consider operating and management contracts with LDCs on a 5-10 year basis. Until recently, most companies were not interested in this mode of operation.

Amont the factors impeding the establishment of R & D facilities in LDCs are a lack of necessary technological infrastructure, insufficient supplies of technical talents in various disciplines, and a lack of long-range planning in technical education to fill R & D needs. Progress in all these respects will be necessary before much expansion can be expected.

Electronics and electrical equipment. This industry embraces a wide range of products from transistors and semiconductors to telecommunications and data processing, and on to heavy electrical equipment such as transformers and switch gears. Manufacture of these products, beyond mere assembly of components, requires sophisticated equipment and a high degree of technical knowledge and skill. The wide diversity of products poses acute problems of

establishing manufacturing and assembly facilities in markets of limited size. Two types of overseas activities in LDCs however are now established: (1) assembling and partially manufacturing end products for local consumption, and (2) producing both intermediary and certain end products for the world market. In the second category is the now well-known practice of manufacturing electronics components and consumer products in such places as Taiwan, Hong Kong, and Singapore. Further expansion of overseas manufacture seems likely for items such as cables and miscellaneous hardware.

Most companies design their products for worldwide application and make little effort to adapt individual items to local markets, particularly if the markets are small. When such adaptation is done, it is almost always carried out in the United States. The current trend toward "functional integration" in solid-state electronics reinforces this tendency towards centralized design of products and processes. Nevertheless, an awareness exists of the growing demand for products that are more pertinent to the needs and conditions of LDCs. Japan's success in selling transistor radios is a case in point. A future possibility would be computers designed for LDCs that might have systems with simpler programming languages and a much more limited set of options for the attachment of equipment. A need also exists for apparatus designed for simplicity of installation, maintenance, and operation rather than optimum system performance.

Automotive, farm, and construction equipment. Assembly facilities for automotive, farm, and construction equipment are now located in many LDCs. In some, the facility amounts to nothing more than a large garage assembling a few hundred items a year. In countries such as Brazil, Argentina, and India, however, integrated assembly and manufacturing operations produce thousands of items annually with anywhere from 50 to nearly 100 percent of the components manufactured locally. As in other industries, the need and justification for R, D & E in an LDC depend on the size of its domestic market and its stage of industrial development (particularly of industries supplying materials and parts).

Based on these considerations, one automobile company divided its overseas operations into four categories. In large markets such as Germany, the company's subsidiaries engage in full-range assembly, parts manufacturing, and associated R, D & E, including product design and adjustments in production techniques to suit the local market needs and supplier conditions. In medium-size markets such as Brazil and Argentina, the company undertakes assembly and local manufacture of components and parts with substantial amounts of engineering, but limited amounts of development, and virtually no research on product design. Small-to-medium-size

markets such as Colombia and Iran have limited operations, including assembly and some production of "hang-on" parts, such as tires, batteries, radiators, and exhaust systems. R, D & E is restricted to quality control and production engineering of locally manufactured parts. In small markets such as Thailand or Morocco, only a few hundred items of any one model are assembled each year, with little or no local manufacture of parts, and no R, D & E. This breakdown illustrates the specific policy of one company on the relationship among size of market, scope of manufacture, and extent of related R, D & E activity; it also illustrates more generally the handicaps that small, poor countries face in developing their R, D & E capabilities.

Firms manufacturing farm, earth-moving, and construction equipment generally adhere to established design standards, regardless of where the product is used or manufactured. Even when local environmental conditions and legal requirements call for certain design changes and substitutions, the necessary work is generally done by the U. S. -based design groups. These equipment manufacturers report that so far no commercial incentive exists to design equipment exclusively for one or more LDC markets. Most products marketed and/or manufactured in LDCs are U. S. prototypes with minor adaptations to LDC conditions made locally.

Where a market develops to sufficient size and commercail attraction, the amount and sophistication of R, D & E undertaken locally will depend, among other things, on the technical capabilities of local nationals and the availability of technical-support facilities (where one company alone cannot justify setting up its own laboratory). In most cases, U. S. firms and affiliates are prepared to supply technical guidance and training in such areas as quality control, material standards, and process engineering. As a minimum, in connection with manufacturing operations, they supply materials specifications, process standards, and quality-control procedures. Local affiliates are generally required to adhere to global standards, but in some cases affiliates are permitted to modify material outputs standards and specifications so long as they comply with performance and worldwide interchangeability criteria. The flexibility and opportunity to use local ingenuity applies not only to the selection and processing of production materials, but also to machine tools, heat-treating processes, welding, coating, and other steps involved in working base materials into finished products. Process technology may be extended to local supply manufacturers of such input items as rolled steel, castings, and forgings, as well as components such as electric starting motors, alternators, and turbochargers.

General Conclusions

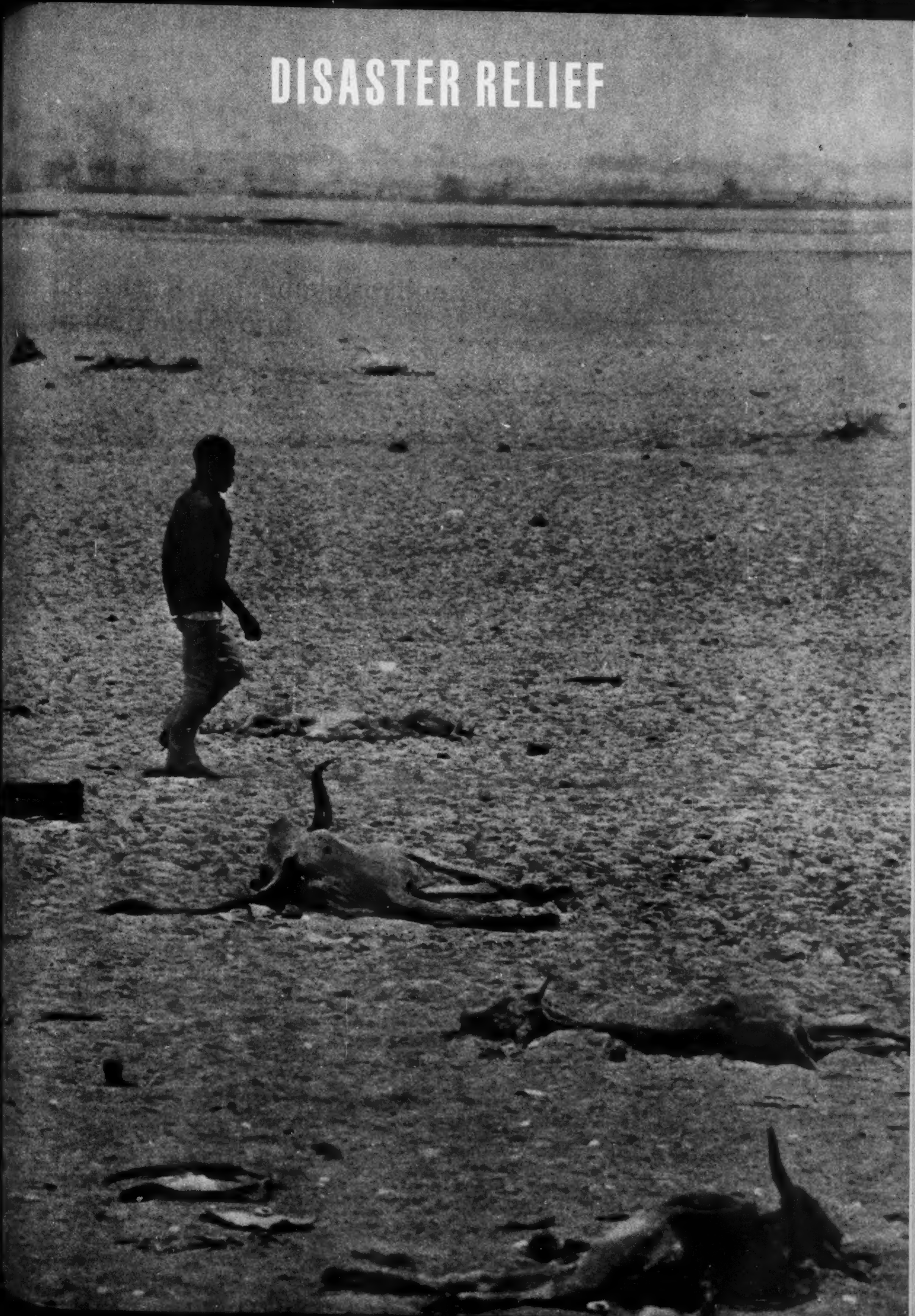
The job of the international corporation is only incidentally to promote the industrial development of the countries in which affiliates are located—its real raison d'etre is to make a reasonable profit and to stay alive in the face of often severe competition. Because the potential for conflict between LDC and multinational corporation is so great, a high order of statesmanship—one of the rarest commodities—is required of both sides. Central to this statesmanship are (1) understanding of, and respect for, each other's objectives and constraints; and (2) willingness to eschew short-term advantage and focus on the long-term view.

The mutual understanding, stressed throughout this report as a sine qua non for a lasting relationship between international corporations and host countries in the less developed world, calls for agreed-upon mechanisms for negotiating changes in the ground rules. Essentially, such mechanisms should permit joint exploration of emerging problems before the problems have succeeded in arousing strong emotions or have led to precipitate action by one or another of the parties involved. But two other factors need to be present for a constructive dialogue: low-income countries must clearly perceive their development goals in relation to industrial R, D & E; and international corporations must begin to look upon their operations from a developmental perspective, attuning their objectives increasingly to those of their host countries.

Another general conclusion is that LDCs should usually approach the R, D & E sequence in reverse, as E, D & R. That is, after the introduction of basically new technology from abroad, the steps in the hierarchy of indigenous technological development first involve the acquisition of engineering capabilities (E), such as the introduction of materials specifications and standards, the management of quality-control systems, and the operation of tool shops. More ambitious work—utilization of new materials, and adaptations of production and processing techniques (D)—can best come next. Only after a firm has the capacity to copy, adapt, and improve existing technology can it safely venture on to the wholly uncharted terrain of creating completely new technology (R).

[Excerpted from U. S. International Firms and R, D & E in Developing Countries. Washington, D. C. : National Academy of Sciences, 1973, pp. xiii, 1-3, 14-15, 20, 33-42.]

DISASTER RELIEF



SEVERAL YEARS OF DROUGHT
HAVE DEVASTATED LIVESTOCK IN SIX AFRICAN COUNTRIES TO THE SOUTH OF THE SAHARA DESERT, CAUSING WIDESPREAD FAMINE.
[PHOTO: AGENCY FOR INTERNATIONAL DEVELOPMENT]

Disaster Relief Administration in the Third World

Lawrence Anderson Burley

[The appearance of large-scale disaster relief programs, while gratifying, raises problems that merit critical attention and new policy consideration. Administrative, political and socio-economic problems are looked at, and policy suggestions are offered.]

The evident commitment of the international community to large-scale disaster relief is one of the more cheering phenomena of the post-war world. It has also created new problems, and thrown older ones into sharper focus. The effect of (and manipulation of) international public opinion, the relative merits of multi-million dollar investments in emergency relief as opposed to long-term development, the growing sensitivity of Third World governments, the consequences of massive relief assistance upon traditional social structures—all these issues are sufficiently important of themselves to merit a closer study of the disaster relief situation. Given new urgency by the recent experiences in Nigeria/Biafra and Pakistan/Bangladesh, they have brought the international agencies to a crossroads. The problem might be stated thus:

A. Is there a justification for large-scale disaster relief?

B. If so, what are the recurrent—as opposed to localized—problems in relief administration? Can a policy model be drawn from past experience as a guide to future action?

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Relief or Not?

The prima facie case against large-scale disaster relief is considerable. First, disaster relief (DR) has by nature a high waste risk and is expensive to deliver, and this at a time when the falling level of aid should be placing a premium upon cost-effectiveness. Costs of 40 percent or more of the value of material aid delivered are not unusual, especially if airlifts are called for (compared with the 15 percent average aimed at in most development programs). Competent personnel, for instance, must be expensively recruited for short periods of time and deployed efficiently in areas where the whole infrastructure may have collapsed. Second, long-term development plans have a habit of emerging from DR situations, since agencies are anxious to obtain some permanent return for their expensive investment. But the area might not otherwise have been selected, may be less suitable than other areas (in terms of infrastructure, for instance) for the kind of development assistance the agency is able to offer, and will not necessarily, in the host government's view, be a political priority area. Indeed, in many cases (Bengali refugees in India, Palestinian refugees in Arab countries, Sudanese refugees in Congo, Ethiopia, CAR) the government will be at great pains to prevent any long-term plans that (a) tend to underline the permanency of a situation that it wishes to keep temporary; (b) may favor a refugee group over neighboring groups.

Finally, possible sources of misunderstanding, never hard to find, multiply rapidly in the relief situation and can have their effect on future development cooperation. For example, massive injections of relief assistance can contribute powerfully to the breakdown of traditional structures in an area, while offering no alternative structures because of its temporary nature. Moreover, the sensitive nationalism common to most Third World governments tends to double in disaster situations (Peru) and naturally to double again in disaster situations of their own making (Nigeria/Biafra, Pakistan/Bangladesh). The effect can be to increase the administrative, political and social problems already mentioned, and to place a special premium on tact and mediatory skills in the program directors.

While weighty, these factors do not of course make the total equation, and they should perhaps be seen in conjunction with three other factors:

1. The effect of public opinion in the developed world, faced with disaster situations, is diffuse but powerful. The interrelated effects of advertising agencies and the mass media, of pressure groups (e.g., churches), and of "pressure countries" (Holland, Scandinavia) on Western policies well merit a separate study. Suffice it to say that this effect has been considerable, shows no sign of

diminishing, and must be a principal factor in the formulation of government and international policies on disaster relief.

2. Funds (to the despair of development agencies) always seem to be available for emergency relief operations—from the general public, who can identify more easily with the need, and from governments, who see a short-term commitment long on political capital. The huge aid program to Bangladesh alone, through bilateral, multilateral and voluntary agency channels, now totals over $1 billion (including the value of grain shipments), with relief operations by no means yet concluded (compared to UNDP's 1972 global budget of some $225 million). The U. S. government's massive contribution to the churches' airlift into Biafra included planes at nominal cost; and the airlift operating costs of the principal voluntary agency consortium, Joint Church Aid, were by 1969 exceeding $800, 000 per month. The sums involved are considerable; the relief agencies are entering a new ear at the side of the big battalions, and this in itself calls for a reassessment of relief policies.

3. The political consequences of not aiding a disaster-struck area have been apparent to U. S. policy-makers since the days of Marshall, and the present state of fluctuating spheres of influence in a changing constellation of world powers makes this preoccupation all the more relevant.

Resolving the Problems

How then can the recurrent problems in DR administration be resolved? As outlined above, they would appear to fall into three very interrelated categories: administrative, political and socio-economic.

Administratively, the high cost of, and local infrastructural difficulties in, delivering relief assistance are compounded by a slowness in agency response. Material aid comes tardily and/or is unstandardized and unsuitable for specific country conditions. Too many agencies are limited by their own frameworks (local churches, local Red Cross) or spheres of reference ("children," "agriculture"). A corps of trained relief administrators is sadly lacking, and the high rate of turnover in personnel, a natural consequence of short-term assignments, is not conducive to creating one.

Possible avenues to a solution might include the creation of a super-agency with a permanent, trained administrative corps; an expansion of the concept of agentship, whereby relief assistance is channelled through the agency with the most experience in a given area; or, more modestly, attempts at more genuine coordination between agencies at country level.

While retaining the idea (developed below) of a small central body as a storehouse/referral center for administrative and mediatory talent, an energetic attempt at country-level coordination would yield immediate dividends and still respect the tangled and sensitive skein of independent agencies. The UN Relief Operation in Dacca, Bangladesh (UNROD) has attempted this role with some measure of success in a highly confusing relief situation with no fewer than fifty voluntary agencies in the field. But, with the voluntary agencies traditionally suspicious of UN bureaucracy and poor cost-effectiveness, UNROD's credibility suffered from the over-centralization and slowness in response that plagues the UN in general and is particularly inappropriate in an emergency situation. Any attempt to make a UN agency the focal point for relief coordination would have to be matched by a significant decentralization and bureaucratic streamlining within the organization itself.

In searching for qualified administrators, the Third World experience of the rapidly growing multinational firms should not be overlooked; some major corporations might agree to give leave of absence to suitable executives for short relief assignments (one of the most successful relief team leaders on the federal side of the Nigerian civil war was a senior executive on leave from the Bank of America's London branch). Ability to empathize and communicate with the host country's nationals remains, of course, the principal requirement, and to this end an increase in Third World nationals as Program Directors would be a welcome trend. The effective record of the recent Ceylonese director of the World Council of Churches program in Bangladesh is a case in point.

Nor should local leadership be neglected. The assertion, raised by a recent sutdy of 100 different disasters (since 1963) made by the Ohio State University Disaster Research Center, that local resources are far less paralyzed than is commonly believed to be the case, and that relief agencies make insufficient use of local administrative talent, needs to be examined.

Politically, particularly in man-made disasters, the raw nerves within the host government are not likely to be soothed by outside agencies bent, under pressure from their home constituents, on action first and considerations of national sovereignty second. The deep resentment felt by the federal Nigerian government as unidentified (but well-known) planes unabashedly violated "their" airspace should not be forgotten. In July 1971, General Gowon wrote a confidential letter to President Yahya Khan warning him on no account to allow the voluntary agencies into (then) East Pakistan if he wished to keep "control" of the situation. Oversubmissive respect for a host government's views is not, of course, necessarily the best way

of performing a service for humanity. But that government may remain as a future partner in development.

Two recent crises have revealed differing attempts to overcome the political problems attendant on DR operations. In Nigeria, Joint Church Aid's informal, precedent-breaking and sovereignty-ignoring strategy certainly achieved results, though at the cost of incurring federal displeasure and laying itself open to the charge of prolonging the war and consequently the suffering it aimed to alleviate. In Bangladesh a policy (inevitable for a UN agency) of total respect for the host government's views led to some awkward moments when the activities of a relief operation, installed under the Pakistani regime and largely staffed with personnel more used to truce-keeping operations, had to survive the critical glance of the new Bengali government. Defining the exact role, then, of the foreign worker, and finding the precise balance between tact and efficiency, remain all-important but elusive goals.

A fruitful approach to this difficult problem might lie in a combination of a serious search for motivated and politically secure local leadership with an agency leadership more specifically trained in the skills of mediation (the experience of men such as Arthur Lall, former Ambassador to the UN from India, need urgently to be translated to the relief situation.

<u>Socially and economically</u>, some problems such as the breakdown of traditional structures, are inevitable in economic development, but are heightened by relief action. For instance, to spread through salaried work and artificial purchase of cash crops, a money economy through a refugee camp consisting largely of peasants living formerly at subsistence level may create more problems for the government than it solves, once the relief agency has left, and the refugees can no longer maintain their new economic status. The goal for a relief (as opposed to a development) agency should be limited to a restoration of, and not an improvement upon, the status quo ante. In the attempt to mitigate the effects of massive relief, the level of sophistication of the drugs, food and clothing dumped on the society needs also to be controlled closely.

<u>Proposals</u>

In the face of these problems, certain measures might be taken to improve and streamline the assistance-giving machinery, and to translate the suggestions already made into more rapid actions.

First, a small secretariat, attached to the UN, could serve as a clearinghouse for several major donors, and maintain a handful of skilled and internationally acceptable administrators. In prototype,

the recently formed UN Disaster Relief Office, based in Geneva, is attempting to fulfill part of this need: however, inadequate funding may cripple its performance.

A major role such an office could play would be to encourage, and keep track of, permanent pledges in recurrently needed supplies, especially foodgrains and logistical equipment, which could be stockpiled on a revolving basis—if necessary within the country of origin. An ability to rely on prompt, preplanned assistance of known utility in the first crucial weeks would be of tremendous benefit to DR program directors. In this vein the Swedish government has already undertaken to make an emergency medical team permanently available for service anywhere. Some modest but permanent financing is essential if immediate disaster response is to become a reality.

In addition, such an agency could pursue several other means to a more efficient delivery of disaster relief, from ruling on which tax-deductible drug donations are actually suitable for Third World situations, to the encouragement of an international treaty on disaster operations on the lines of the 1967 Addis Ababa discussions on refugee rights. A great deal could be achieved by a convention which permitted freedom of action within previously prescribed limits, and which acknowledged that humanitarian concern for victims of man-made disasters implies no hostility to any protagonist.

Finally, close contact should be fostered between those institutions researching into mediation and conflict resolution and those people whose mediatory skills are actually put to the test in DR situations. The insufficiency of present academic resources has led Sir Robert Jackson to suggest a special college for the training of development planners and administrators. If such a college is ever created, the special needs of DR personnel should find a place in the curriculum.

[Excerpted from "Disaster Relief Administration in the Third World," International Development Review. Washington, D.C.: Society for International Development, Vol. XV, No. 1, 1973, pp. 8-12. Copyright © 1973 by the Society for International Development.]

Coordination of International Emergency Disaster Relief

Russell S. McClure

[The results of disaster relief efforts in recent years point to an acute need for inter-agency and international coordination. Within host country governments, contingency planning and assignments of responsibility could contribute greatly; at the international level, a new UN organization promises to be of value.]

Experience over recent years demonstrates that the problem of coordination of international emergency relief efforts is very real. A review of major disasters in the last five years—Biafra in 1968/69, the Peru earthquake in 1970, the East Pakistan cyclone in 1970, the Indian-Pakistani war of 1971, the Luzon floods of 1972 and the Managua earthquake of 1972—reveals that the international response achieved less than maximum effectiveness in most cases because of imperfect coordination. The usual result is either a hasty over-response, or under-response or both. Of equal danger is the likelihood that emergency foreign assistance may be unresponsive to acute specific needs, because donor governments working alone may assume that some other donor is dealing with them.

Coordination Within the Government of the Disaster Stricken Country

Too often, the host countries, even those with disaster-prone histories, have done little to prepare in advance for disaster emergencies. In many countries, no contingency plan has been prepared which

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disposes in advance of such key questions as: 1) Who's in charge of the government's emergency response? 2) Where is the command post and who directs it? 3) Which ministry is charged with what specific emergency functions? 4) What material resources are available within the country which can be employed in disaster situations and where are they located? 5) Who is responsible for systematic assessment of damage and casualties, and for translating that assessment into requirements for materials and services? 6) Who is responsible for planning and deploying adequate in-country communications? and 7) What arrangements exist for liaison with foreign diplomatic missions, international organizations and private voluntary agencies, and for coordinating their assistance?

If these questions have been studied in advance by the host government and clear answers provided, foreign donors can be informed with reasonable accuracy of those net emergency requirements which the host government is unable to meet. Foreign assistance in a national disaster is able, after all, only to supplement a nation's own relief efforts— it can never replace them. When the net requirement is known and the needs communicated to the foreign community, coordination of foreign assistance becomes more manageable. The prospective donors, be they governments, UN agencies or voluntary agencies can then compare notes on who can best do what. They can then get on with the job with reasonable confidence that what they do will meet priority needs and that the risk of duplication has been minimized. In the catastrophic Luzon floods of mid-1972, for example, the Government of the Philippines was ready with a contingency plan and with a Disaster Control Organization. It was a Filipino official who was in command and a Filipino organization that assessed damage, determined requirements and worked out with bilateral donors the best content and use of foreign emergency help.

When advance planning and organization has not been done, the result when disaster strikes is often near bedlam. Different ministries see different parts of the problem; no minister ever seems to have funds he is authorized to use for non-budgeted purposes; and each ministry may issue separate situation reports and appeals for help, often contradicting other ministries. In the absence of an inventory of in-country supplies and services, requests for foreign help often tend to ignore local resources for self-help and as a result can be sharply inflated above actual needs. Foreign donors are unable to obtain a coherent overall picture of the problem, and are forced to reach their own necessarily arbitrary and uninformed judgments on the nature of the needs.

Coordination Among Multilateral Agencies

Conceptual recognition of the need for close working cooperation among operational UN offices and specialized agencies has been achieved within the last two years. Such organizations as UNICEF, WHO, FAO, WFP, and UNDP are often asked for help in disaster situations and as available resources permit endeavor to extend needed assistance. As each of these agencies has a different mission and necessarily a somewhat different perspective, it is not surprising that situations have arisen in the past in which actions separately undertaken among the group have lost maximum impact potential through failure to achieve full coordination among themselves. The General Assembly in January 1972 recognized this in adopting a resolution (A/RES/2816-XXVI) establishing a United Nations Disaster Relief Office (UNDRO), headed by an official of Under Secretary General rank, whose mandate includes: "To mobilize, direct and coordinate the relief activities of the various organizations of the United Nations system" in responding to appeals for disaster relief assistance.

The basis is thus laid for well-coordinated UN action in emergency situations. Working procedures will take time to fully evolve and new relationships must be established. Experience gained in Bangladesh, where the UN has played a central role in emergency assistance, has undoubtedly been helpful in establishing a structural pattern for cooperative action by UN agencies, even though the Coordinator's role in this instance was not played by UNDRO.

[Excerpted from "Coordination of International Emergency Disaster Relief," a paper presented at the Stanley Foundation Conference at Lake Mohonk, New York, May 2, 1973.]

Problems of International Emergency Aid

Toni Hagen

[Too often the materials supplied for the relief of disasters are inappropriate or useless, while the organization of self-help activities that would be more pertinent is neglected. Some of the successful activities improvised in Bangladesh in 1972 point to a more fruitful approach.]

The earthquake in northern Peru on May 30, 1970, affected an area of about 65,000 square kilometers and a population of approximately 1 million people, primarily Indians. Some 186,000 houses were destroyed or seriously damaged, 20,000 dead were counted and an additional 50,000 people were listed as missing. While the human tragedy in the earthquake district was immeasurable, the economic damage proved to be relatively slight. The important fishmeal industry and the steel industry in Chimbote were not affected. The extent of the catastrophe could not be compared, for example, with those which subsequently hit Bangladesh. But the propaganda mills of international charity went into high gear and produced an influx of "BM items" (babyfood, blankets, milk powder, medicines; wheat and other basic foods are not part of the BM-complex). Aside from the fact that the BM shipments were not coordinated, they arrived on the scene too late. The injured who

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had been buried under the debris of their homes needed medical aid within the first 24 or the at the latest 48 hours; medical assistance reaching the scene later was often useless.

The main problem facing the population was the rebuilding of houses, particularly in the Andes valleys where the nights are especially cold. The houses of the Indians are very simply built from air-dried clay bricks. The roofs are of tiles, but increasing use is being made of corrugated tin. The Indians build their houses themselves, with a number of families often getting together to make a team. The rebuilding of such simple housing required neither foreign experts nor woolen blankets, but simply money with which to purchase the necessary building materials and to pay the salaries of the extra workers needed. Yet several charity organizations spent a great deal of money flying in tends and prefabricated houses. Frequently they were so complicated that foreign specialists were needed for their assembly, while a horde of unemployed earthquake victims had to stand by watching foreign emergency aid workers performing labor that they themselves should have been doing. In the virtually destroyed city of Caras in the Andes (population 30,000) one European organization put up 519 foam-plastic igloos at a price equivalent to $800 each. One year later 33 of the igloos were uninhabited and 65 had been destroyed. If the $400,000 which the igloos cost had been placed at the disposal of the earthquake victims in cash, the money would have doubtless sufficed to rebuild most of the city's 4,000 destroyed homes.

The effectiveness of the so-called "instant aid" following the earthquake in Peru was minimal. With efficient organization the undamaged 92 percent of the country, which included its economically most important areas, would have been quite able to mobilize sufficient local doctors, trucks for transportation and heavy construction machinery to clear the rubble. What was lacking was cash with which to employ the many unemployed victims and enable them to make low-cost loans in order to rebuild their houses and restore their livelihoods through the purchase of tools and agricultural materials. But the idea of "helping people to help themselves" was ignored in Peru.

A look at the two principal aid campaigns for Bangladesh reveals some illuminating contrasts. Following the catastrophes of 1970 and 1971 in East Bengal, both the Bangladesh government and UNROD (United Nations Relief Operation Dacca) urged that traditional humanitarian aid in the form of "BM articles" be toned down or eliminated in favor of assistance for reconstruction and development. The repeated appeals issued in the early stage of the aid programs yielded gratifying results. Most private organizations took the bold step away from charity and toward helping people to help themselves.

For example, the British organization Oxfam purchased six large ferry boats for the Bangladesh government, for use at the most important river crossings.

The largest program among the private organizations, totalling $36 million, was carried out by CORR (Christian Organization for Relief and Rehabilitation). This group had been so successful following the calamitous floods in 1970 that later, when it became necessary to offer energency aid and reconstruction assistance to the new state of Bangladesh, all Catholic donor organizations in the world made their funds available directly to CORR, which also received donations from the governments of the United States, West Germany and Switzerland. This marked the first time that such a well managed local organization was created in a catastrophe-struck country to coordinate the efforts of many charitable groups. This is a fundamental prerequisite for effective emergency aid. At an early point in its operations CORR made it clear to its regional directors in Bangladesh that no foodstuffs were to be distributed free but that, as a matter of principle, recipients would have to work in order to be entitled to assistance. A total of $3.4 million— and about the equivalent number of workdays — were spent on labor-intensive projects such as road building, bridge building, construction of irrigation canals, and similar efforts. As of May 1972 all aid was given only on condition that 50 percent of it was to be regarded as a loan and repaid. Procurement of large items, such as diesel pumps, single-axle tractors, etc., was done only on behalf of groups of recipients who had banded together into cooperatives. This policy proved so effective that in some districts half the loans had been repaid by the end of 1972. Such repayments were only possible because in fact considerable income had been generated.

An old Chinese proverb says: "If you give a starving man a fish, he has a meal. If you give him a fishing net, he has a meal every day." But in the field of humanitarian emergency aid, would-be benefactors often continue to dole out a meal to the poor victims and then, with a sense of relief and a job well done, leave them to suffer chronic hunger.

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